



Massachusetts Department of Environmental Protection  
Bureau of Waste Prevention – Industrial Wastewater  
**BWP IW 38 & BWP IW 39**  
Permit for Industrial Sewer User

W201133

Transmittal Number

130595

Facility ID# (if known)

DEP Use Only

**Important Instructions for Completing This Form**

Date Received

The questions on this form apply to existing and new facilities discharging industrial wastewater to sewers. If you are completing this form for an existing facility, answer the questions as they apply to its current status. If you are completing this form for a new facility, your answers will reflect your commitment to comply with the requirements as set forth in each question.

Existing facilities are defined as facilities in existence as of July 12, 2007. New facilities are defined as facilities constructed after July 12, 2007.

Answer all questions, except those that you are directed to skip. Please DO NOT answer questions that you are directed to skip

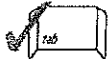
**Permit Category** (Select One)

☒ BWP IW 38: Industrial Sewer User in IPP POTW discharging more than 50,000 GPD

☐ BWP IW 39: Industrial Sewer User in Non-IPP POTW discharging more than 25,000 GPD

**A. Facility Information**

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Rohm and Haas Electronic Materials, LLC

1a. Facility Name

455 Forest Street

1b. Facility Address 1

1c. Facility Address 2

Marlborough

1d. City

(508) 229-7250

1g. Phone Number

04-3252691

1i. Federal Employer Tax Identification Number (FEIN or TIN)

MA

1e. State

(508) 460-0522

1h. Fax Number

01752

1f. Zip Code

Mailing Address: ☒ Check here if same as Facility Address and skip to Contact Information.

2a. Mailing Address: Street or P.O. Box

2b. Mailing Address 2

2c. City

2d. State

2e. Zip Code

**Contact Information:**

Sarita Croce

3a. Contact Person Name

Environmental Engineering Manager

3b. Contact Person Title

(508) 229-7250

3c. Phone Number

3d. Extension

SCroce@rohmmaas.com

3e. Email Address



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**B. Industrial Wastewater Information**

1. Project Description (Check All That Apply)

- ☐ 1a. New Construction ☐ 1b. Permit Renewal
- ☐ 1c. Increasing Flow From Existing Connection ☐ 1d. New or Modified Industrial Wastewater Pretreatment System (IWPS)
- ☒ 1e. Existing Unpermitted Connection  
(Constructed Before 7/12/07 – **BWP IW 10 was submitted to MADEP in December 1996**)

2. List, in descending order of significance, the Standard Industrial Classification (SIC) codes, which best describe the facility producing the discharge in terms of the principal products or services provided. Also, specify each classification title. (See Appendix B in the Instructions)

2899	Chemicals and Chemical Preparations, NEC
2a. SIC Code	Description
2b. SIC Code	Description
2c. SIC Code	Description
2d. SIC Code	Description

3. List all sewer connection(s) and their maximum daily flow(s) in gallons per day (GPD) from your facility going to the Publicly Owned Treatment Works (POTW): (flow data presented below for S01 is for period from 11/2006 through 10/2007)

	S01	NS02		3d. Total Flow, All Connections
	3a. Connection #	3b. Connection #	3c. Connection #	
SANITARY	14,900	2,114		17,014
	GPD	GPD	GPD	GPD
INDUSTRIAL	45,100	258		45,358
	GPD	GPD	GPD	GPD
TOTAL	60,000	2,372		62,372
	GPD	GPD	GPD	GPD

4. Are you in compliance with the Massachusetts Historical Commission requirements?

- ☒ Yes ☐ No\* \*If No, You Must Comply With Massachusetts Historical Commission Requirements **BEFORE** You Can Submit This Application.

5. Are you in compliance with Massachusetts Environmental Policy Act (MEPA) requirements?

- ☒ Yes ☐ No\* \*If No, You Must Comply With MEPA Requirements **BEFORE** You Can Submit This Application.



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**B. Industrial Wastewater Information** (continued)

6. Check all pollutants that are present in your industrial wastewater **before** pretreatment, or if not treated, before discharge:

☒ 6a. Metals, Asbestos, Cyanide, Phenols

If Metals, Asbestos, Cyanide, or Phenols are present, provide concentrations in milligrams per liter (mg/L):

1. Antimony (total) (Sb)	<u>See Attachment A</u> mg/L	9. Nickel (total) (Ni)	_____ mg/L
2. Arsenic (total) (As)	_____ mg/L	10. Selenium (total) (Se)	_____ mg/L
3. Beryllium (total) (Be)	_____ mg/L	11. Silver (total) (Ag)	_____ mg/L
4. Cadmium (total) (Cd)	_____ mg/L	12. Thallium (total) (Tl)	_____ mg/L
5. Chromium (hexavalent)	_____ mg/L	13. Zinc (total) (Zn)	_____ mg/L
6. Chrome (total) (Cr)	_____ mg/L	14. Asbestos	_____ mg/L
7. Copper (total) (Cu)	_____ mg/L	15. Cyanide (total) (CN)	_____ mg/L
8. Lead (total) (Pb)	_____ mg/L	16. Phenols (total)	_____ mg/L

☒ 6b. Toxic Pollutants (See Section 17B in the Instructions.)

If Toxic Pollutants are present, provide the total Toxic Pollutants concentration in micrograms per liter (ug/L):

**See Toxic Pollutant Forms and Attachment A**

6b1. Total Toxic Pollutants Concentration (ug/L)

NOTE: Use the **Toxic Pollutants Form** to list individual toxic chemicals and their concentrations.

☒ 6c. Total Petroleum Hydrocarbons (TPH) > 15 mg/L

☒ 6d. pH <5 and >10 Standard Units (S.U)

☒ 6e. Other\*

\*If Other Pollutants are present, describe them:

BOD, TSS, nitrogen and phosphorous - See wastewater sampling results in Attachment A

## B. Industrial Wastewater Information (continued)

7. Is Mercury (Hg) present in your industrial wastewater **before** pretreatment, or if not treated, before discharge?

☐ Yes☒ No\*

\*If No, skip to Question 8.

7a. If Yes, have you identified all possible mercury sources and taken all reasonable steps to eliminate the mercury?

☐ Yes\*☐ No

\*If Yes, skip to Question 8.

7b. If No, explain why.

NOTE: As of May 1, 2009, all facilities must meet a discharge limit of 1 part per billion (ppb) for Mercury.

8. What is the name of the Publicly Owned Treatment Works (POTW) that receives your wastewater? (See Appendix C in the Instructions.)

Marlborough Westerly Waste Treatment Works  
Name of POTW

9. Do you have a current sewer connection discharge permit or a current written approval issued by your local POTW? (See Section 17B in the Instructions.) **See Attachment B for permits.**

☒ Yes☐ No\*

\*If No, you must obtain either a permit or, if a permit is not required, a written approval from your local POTW to discharge **BEFORE** you can submit this application.

If you have a permit, provide the following information, then skip to Question 10.

SIU 4817950 (S01) & NSIU4817950-1 (NS02)  
9a. Permit Number

12/03/2011 (S01) and 02/09/2008 (NS02)  
9b. Permit Expiration Date

If you have a written approval, provide the following information:

9c. Date of Approval Letter

9d. Name of Person Who Signed the Letter

10. Are your POTW and local Sewer Authority the same entity? (See Section 17B in the Instructions.)

☒ Yes\*☐ No

\*If Yes, skip to Question 12.



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**B. Industrial Wastewater Information** (continued)

11. Do you have a current sewer connection discharge permit or a current written approval issued by your local Sewer Authority? (See Section 17B in the Instructions.)

☐ Yes

☐ No\*

If No, you must obtain either a permit or written approval from your local Sewer Authority to discharge **BEFORE** you can submit this application.

If you have a permit, provide the following information, then skip to Question 12.

11a. Permit Number

11b. Permit Expiration Date

If you have a written approval, provide the following information:

11c. Date of Approval Letter

11d. Name of Person Who Signed the Letter

12. Is your facility currently classified as a Categorical Industrial User (CIU) pursuant to Federal Regulations? (See Appendix D in the Instructions.)

☐ Yes

☒ No\*

\*If No, skip to Section C.

12a. List all the Categorical Pretreatment Standards applicable to your facility.

12a1. Part Number

Point Source Category

12a2. Part Number

Point Source Category

12a3. Part Number

Point Source Category

12a4. Part Number

Point Source Category

**C. Industrial Wastewater Pretreatment System**

1. Do you have an on-site industrial wastewater pretreatment system (IWPS) to treat your industrial wastewater?

☒ Yes

☐ No\*

\*If No, skip to Section D.

1a. How many IWPSs do you have?

2

Number

NOTE: If you have more than one IWPS, please use an **Additional IWPS Form** for each additional IWPS.

1b. Provide a unique identifier (i.e. name) for this IWPS:

Main Pretreatment System – Outfall CO1

Identifier/Name



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**C. Industrial Wastewater Pretreatment System** (continued)

1c. What is the Total Design Capacity of this IWPS?

90,000

Gallons Per Day

1d. What is the Average Daily Flow of this IPWS? (Estimate if this is a new facility.)

32,900 (12 month period from 11/2006-10/2007 for outfall C01)

Gallons Per Day

1e. What is the Maximum Daily Flow of this IWPS? (Estimate if this is a new facility.)

45,100 (12 month period from 11/2006-10/2007 for outfall C01)

Gallons Per Day

2. Is your IWPS designed and constructed to meet all local discharge standards and the applicable Categorical Industrial User (CIU) standards in 40 CFR Chapter I, Subchapter N?

☒ Yes

☐ No\*

\*If No, you must take immediate steps to address the non-compliance **BEFORE** you can submit this application.

3. Does this IWPS treat hazardous industrial wastewater or hazardous industrial wastewater sludge as defined in 314 CMR 7.02?

☒ Yes

☐ No\*

\*If No, skip to Question 12.

3a. Are you treating concentrated chemical baths, e.g. spent chemical baths, or off-specification products?

☒ Yes

☐ No\*

\*If No, skip to Question 4.

3b. If Yes, describe the concentrated chemical baths you are treating.

The waste chemistry associated with circuit board technology.

4. Does your IWPS meet the requirements of "treatment which is an integral part of the manufacturing process" as defined in 310 CMR 30.010?

☒ Yes\*

☐ No

\*If Yes, skip to Question 7.

5. Do you store hazardous industrial wastewater or hazardous industrial wastewater sludge that is generated in your IWPS or in your production processes, in tanks or containers?

**Note:** If you use in-ground tanks for storage of hazardous industrial wastewater or sludge and your IWPS is located in a Drinking Water Zone (see Section 17C of the Instructions; reference language in 310 CMR 30.605), you are not eligible to apply for a BWP IW 38 or BWP IW 39 permit. You must use form BWP IW 40 instead.

☐ Yes

☐ No\*

\*If No, skip to Question 7.



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**C. Industrial Wastewater Pretreatment System** (continued)

6. Are you in compliance with the requirements for tanks and containers in 310 CMR 30.342 and 343? (See Section 17C in the Instructions)

☐ Yes

☐ No\*

\*If No, you must take immediate steps to address the non-compliance **BEFORE** you can submit this application.

7. Do you have a U.S. Environmental Protection Agency (EPA) hazardous waste generator identification number?

☒ Yes

☐ No\*

\*If No, skip to Question 7b.

7a. What is your EPA identification number?

MAD 000844498  
EPA ID #

Skip to Question 8.

7b. Explain why you do not have an EPA identification number.

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8. Do you have a visible sign in place that warns against unauthorized entry into the IWPS area?

☒ Yes\*

☐ No

\*If Yes, skip to Question 9.

8a. Explain why you do not have a visible sign in place.

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9. Do you have the required spill containment for the IWPS? (See Section 17C in the Instructions.)

☒ Yes\*

☐ No

\*If Yes, skip to Question 10.

9a. Explain why you do not have the required spill containment.

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10. Is your IWPS located on land subject to flooding from a 100-year storm? (See Section 17C in the Instructions.)

☐ Yes

☒ No\* (See Attachment C) \*If No, skip to Question 12.



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**C. Industrial Wastewater Pretreatment System** (continued)

11. Are you in compliance with the flood-proofing provisions in 310 CMR 30.701(2)? (See Section 17C in the Instructions.)

☐ Yes

☐ No\*

\*If Yes, skip to Question 12.

11a. Explain why you are not in compliance with the flood-proofing provisions in 310 CMR 30.701(2).

12. What type of IWPS do you have? (Check all that apply.)

☐ Fully Automated Industrial Wastewater Pretreatment System (FAIWPS)

☒ Continuous Discharge IWPS

☐ Batch IWPS

13. Is the IWPS exempt from classification? (See Section 17C in the Instructions.)

☐ Yes\*

☒ No

\*If Yes, skip to Question 14.

13a. What is the classification of this IWPS? (See 257 CMR 2.13: Classification of Wastewater Treatment Facilities.)

☐ Class 1I

☐ Class 2I

☐ Class 3I

☒ Class 4I

☐ Class 5 or 6C

☐ Class 1M

☐ Class 2M

☐ Class 3M

☐ Class 4M

13b. How was the IWPS' classification determined?

☐ In accordance with the requirements in 314 CMR 7.05(2)(g) 4. c. or d.

☒ By the Board of Certification of Operators of Wastewater Treatment Facilities

☐ Both

14. Is the IWPS staffed in accordance with the requirements of 314 CMR 7.05(2)(g) 5? (See Section 17C in the Instructions.)

☒ Yes\*

☐ No

\*If Yes, skip to Question 15.





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**C. Industrial Wastewater Pretreatment System** (continued)

14a. Explain why the IWPS is not staffed in accordance with 314 CMR 7.05(2)(g) 5.

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15. Is this your first permit application under Permit Category BWP IW 38 or BWP IW 39 for this IWPS? Or, is this application a request for modification of this IWPS that currently has a BWP IW 38 or BWP IW 39 permit?

☒ Yes\*

☐ No

\*If Yes, you need to submit as an attachment the process flow diagram and description of the principal treatment processes for your IWPS. Otherwise, skip to Question 17.

16. How many attachments are included with this application in response to Question 15?

2: See Attachments D and E

Number of Attachments

17. Have your sewer connection and IWPS been designed and constructed in compliance with the design and construction standards as set forth in 314 CMR 7.05(2)(g)3?

☒ Yes

☐ No\*

\*If No, skip to Question 17b.

17a. What is the Massachusetts Registered Professional Engineer (MAPE) signature date on the engineering plans?

January 1, 2008

Skip to Question 18.

Date

17b. Explain why your sewer connection and IWPS have not been designed and constructed in compliance with the design and construction standards as set forth in 314 CMR 7.05(2)(g)3.

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18. Provide the following information about the Massachusetts Registered Professional Engineer (MAPE) who reviewed, stamped, and signed your engineering plans:

Christopher A. Walton

18a. Name

(781) 273-2500

18b. Phone Number

39510

18c. Mass. P.E. License Number

Civil

18d. Mass. P.E. Specialty



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**C. Industrial Wastewater Pretreatment System** (continued)

19. Do you have an IWPS operation and maintenance manual that complies with the procedures and other requirements in 314 CMR 7.05(2)(g)6.?

☒ Yes\*

☐ No

\*If Yes, skip to Question 20.

19a. Explain why you do not have the required IWPS operation and maintenance manual.

20. Are you keeping your IWPS operation and maintenance manual current?

☒ Yes

☐ No

21. Are you implementing your IWPS operation and maintenance manual?

☒ Yes

☐ No

**D. Monitoring, Reporting & Recordkeeping**

1. Are you keeping your currently effective sewer discharge permit(s), IWPS plan(s), and current operation and maintenance manual(s) (as applicable) on-site at all times?

☒ Yes\*

☐ No

\* If Yes, skip to Question 2.

1a. Explain why you are not keeping these records on-site at all times.

2. Are you keeping all your required records including your wastewater monitoring and analyses records, operation and maintenance records and logs, bills of lading, summary reports of all incidents requiring implementation of the safety plan, and hazardous waste manifests (as applicable) on-site for at least three years?

☒ Yes\*

☐ No

\* If Yes, skip to Question 3.

2a. Explain why you are not keeping these records on-site for at least three years.



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**D. Monitoring, Reporting & Recordkeeping** (continued)

3. [Reserved for Toxics Reporting]

Additional reporting requirements will be added to this section in the future.

**E. General & Specific Prohibitions**

1. After carefully reviewing all of the general and specific prohibitions listed below, are you in compliance with these General and Specific Prohibitions?

☒ Yes\*

☐ No

\*If Yes, read Section F and then complete Section G.

1a. Identify all the prohibitions you are not in compliance with and explain why. Attach an additional sheet of paper to this form, if necessary.

**1. General Prohibitions.** The permittee shall not:

- a. Discharge, or cause to be discharged to a POTW, any substances, materials, or wastewater that may:
  - i. harm the sewers, POTW wastewater treatment process or equipment;
  - ii. have an adverse impact on the receiving waters; or
  - iii. otherwise create a nuisance or endanger public health, safety, or the environment.
- b. Introduce pollutants into POTWs that pass through the POTW or interfere with its operation or performance.
- c. Discharge wastewater or allow discharge of wastewater through any sewer connection that would result in a hazard to the public health or safety.
- d. Discharge bypass wastewater or allow discharge of bypass wastewater through any sewer connection. If bypassing due to an emergency condition occurs, the Department and POTW shall be notified in accordance with 314 CMR 7.04(3). Such notification or its acknowledgement shall not be construed as permission by the Department or POTW to discharge bypass wastewater.
- e. Discharge hazardous waste or allow the discharge of hazardous waste through any sewer connection.

**2. Specific Prohibitions.** The permittee shall not introduce into a POTW or its wastewater collection system the following:

- a. Pollutants which may create a fire, explosion, or other hazard in the POTW or its wastewater collection system.
- b. Pollutants which may cause corrosive structural damage to the POTW or its wastewater collection system. In no case shall discharges with a pH lower than 5.0 Standard Unit (S.U) or more than 10.0 S.U. be allowed, unless the local limit allows such discharges.
- c. Solid or viscous pollutants in amounts which may cause obstruction to the flow in the POTW or its wastewater collection system or may result in interference.
- d. Any pollutant, including oxygen-demanding pollutants, discharged at a flow rate or pollutant concentration that will cause interference with the POTW or its wastewater collection system.
- e. Heat in amounts which may inhibit biological activity in the POTW, resulting in interference. In no case shall heat in such quantities that the temperature at the POTW treatment plant exceeds 40° C (104° F) be discharged, unless the Department, upon request of the POTW, approves alternate temperature limits.



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**F. Additional Conditions**

a. All discharges shall be in compliance with the terms and conditions of this permit. The discharge of any wastewater at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties as provided for in M.G.L. c.21, Section 42.

b. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- i. Violation of any terms or conditions of the permit;
- ii. Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts; or
- iii. A change in conditions or the existence of a condition, which requires either a temporary or permanent reduction, or elimination of the authorized discharge.

c. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges; nor does it authorize or relieve the permittee of any liability for any injury to private property or any invasion of personal rights; nor any infringement of Federal, State, or local laws or regulations; nor does it waive the necessity of obtaining any local assent required by law for the discharge authorized herein by the Department.

d. The provisions of this permit are severable, and the invalidity of any condition or subdivision thereof shall not make void any other condition or subdivision thereof.

e. All information and data provided by an applicant or a permittee identifying the nature and frequency of a discharge shall be available to the public without restriction. All other information (other than effluent data) which may be submitted by an applicant in connection with a permit application shall also be available to the public unless the applicant or permittee is able to demonstrate that the disclosure of such information or particular part thereof to the general public would divulge methods or processes entitled to protection as trade secrets in accordance with the provisions of M.G.L. c.21, Section.27(7). Where the applicant or permittee is able to so demonstrate, the Department shall treat the information or the particular part (other than effluent data) as confidential and not release it to any unauthorized person. Such information may be divulged to other officers, employees, or authorized representatives of the Commonwealth or the United States Government concerned with the protection of public water or water supplies.

f. Transfer of Permits. Any sewer system connection permit authorizing an industrial discharge to a sewer system is only valid for the person to whom it is issued, unless prior to transfer:

- i. The current permittee notifies the Department in writing at least 30 days in advance of the proposed transfer date; and
- ii. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibilities, and liability to the new permittee.

g. This permit authorizing the discharge expires five (5) years from the date of issuance. The permittee shall apply for a renewal of this permit at least ninety (90) days prior to the expiration date, in accordance with 314 CMR 7.09(3)(b) for continued lawful discharges beyond the expiration date.

h. All solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be collected, treated, and disposed of in accordance with applicable provisions in the following:

- i. Hazardous waste regulations (310 CMR 30.000).
- ii. Solid waste regulations (310 CMR 19.00).
- iii. Sewer discharge regulations (314 CMR 7.00).
- iv. Any other applicable federal, state and local laws.

i. All samples shall be analyzed by a Massachusetts Certified Laboratory.

j. The permittee shall provide the Department, and the Department's employees, authorized representatives and contractors, access at to the facility at all reasonable times, including during wastewater treatment system operation or wastewater discharge, for purposes of conducting activities related to oversight of this permit, including inspections to monitor compliance with the terms herein.

The permittee shall allow the Department to obtain information related to compliance with the requirements of this permit. Notwithstanding any provision of this permit, the Department retains all of its access authorities and rights under applicable state and federal law.



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**G. Certification Statement**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true accurate, and complete. I certify that this facility is in compliance with all conditions and requirements of this permit, and all applicable statutes and regulations. I further certify that systems to maintain compliance are in place at the facility or unit and will be maintained even if processes or operating procedures are changed. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations."

(I will be responsible for publication of public notice of the applicable permit proceedings identified under 314 CMR 2.06(1)(a) through (d).)

Michael Guidoboni

Printed Name of Applicant

Operations Manager

Title

Signature of Applicant

1-10-08

Date Signed

Paul Richard, EnviroBusiness, Inc.

Name of Preparer

Program Director

Title

(781) 273-2500

Phone Number

MassDEP Use Only

**Special Conditions:**

See Attachment 1.

This document is a permit issued pursuant to Massachusetts General Laws, Chapter 21, Section 43 and Massachusetts regulations at 314 CMR 7.00. The permittee shall comply with all of the provisions contained in the permit application which are hereby incorporated and made part of this permit.

Date Issued

4/4/08

Permit Effective Date

4/4/08

Name of Regional BWP Section Chief

John F. Kronopolus

Permit Expiration Date

4/4/13

Signature

John F. Kronopolus





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**ATTACHMENT 1.**

**Special Conditions:**

1. The permittee shall maintain compliance with the City of Marlborough's sewer use requirements and the terms and conditions of any applicable wastewater discharge permits issued by the Marlborough Westerly Wastewater Treatment Plant.
2. The documents and materials attached to and referenced in the permit application are incorporated as part of the permit.







Massachusetts Department of Environmental Protection  
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**Additional IWPS Form**  
Use With BWP IW 38 & BWP IW 39

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Permit Code

**Instructions:** Submit a completed copy of this form for each additional Industrial Wastewater Pretreatment System (IWPS) not identified on your BWP IW 38/BWP IW 39 permit application.

## Industrial Wastewater Pretreatment System (IWPS) Information

NOTE: Question numbers on this form are identical with those on the BWP IW 38/BWP IW 39 permit application or Industrial Sewer Connection Certification forms. Questions 1 and 1a have been intentionally omitted.

1b. Please provide a unique identifier (i.e. name) for this IWPS:

ATC Pretreatment System - Outfall NS02

Identifier/Name

1c. What is the Total Design Capacity of this IWPS?

4,300

Gallons Per Day

1d. What is the Average Daily Flow of this IPWS? (Estimate if this is a new facility.)

200

Gallons Per Day

1e. What is the Maximum Daily Flow of this IWPS? (Estimate if this is a new facility.)

258

Gallons Per Day

2. Is your IWPS designed and constructed to meet all local discharge standards and the applicable Categorical Industrial User (CIU) standards in 40 CFR Chapter I, Subchapter N?

☒ Yes

☐ No\*

\*If No, you must take immediate steps to address the non-compliance **BEFORE** you can submit this application.

3. Does this IWPS treat hazardous industrial wastewater or hazardous industrial wastewater sludge as defined in 314 CMR 7.02?

☐ Yes

☒ No\*

\*If No, skip to Question 12.

3a. Are you treating concentrated chemical baths, e.g. spent chemical baths, or off-specification products?

☐ Yes

☒ No\*

\*If No, skip to Question 4.

3b. If Yes, describe the concentrated chemical baths you are treating:

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**IWPS Information** (continued)

4. Does your IWPS meet the requirements of "treatment which is an integral part of the manufacturing process" as defined in 310 CMR 30.010?

☒ Yes\*

☐ No

\*If Yes, skip to Question 7.

5. Do you store hazardous industrial wastewater or hazardous industrial wastewater sludge that is generated in your IWPS or in your production processes and stored in tanks or containers?

**Note:** If you use in-ground tanks for storage of hazardous industrial wastewater or sludge and your IWPS is located in a Drinking Water Zone (see Section 17C of the Instructions; reference language in 310 CMR 30.605), you are not eligible to apply for a BWP IW 38 or BWP IW 39 permit. You must use form BWP IW 40 instead.

☐ Yes

☐ No\*

\*If No, skip to Question 7.

6. Are you in compliance with the requirements for tanks and containers in 310 CMR 30.342 and 343? (See Section 17C in the Instructions)

☐ Yes

☐ No\*

\*If No, you must take immediate steps to address the non-compliance **BEFORE** you can submit this application.

7. Do you have a U.S. Environmental Protection Agency (EPA) hazardous waste generator identification number?

☒ Yes

☐ No\*

\*If No, skip to Question 7b.

7a. What is your EPA identification number?

MAD 000844498  
EPA ID #

Skip to Question 8.

7b. Explain why you do not have an EPA identification number.

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8. Do you have a visible sign in place that warns against unauthorized entry into the IWPS area?

☒ Yes\*

☐ No

\*If Yes, skip to Question 9.

8a. Explain why you do not have a visible sign in place.

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**Additional IWPS Information** (continued)

9. Do you have the required spill containment for the IWPS? (See Section 17C in the Instructions.)

☒ Yes\*

☐ No

\*If Yes, skip to Question 10.

9a. Explain why you do not have the required spill containment.

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10. Is your IWPS located on land subject to flooding from a 100-year storm? (See Section 17C in the Instructions.)

☐ Yes

☒ No\*

\*If No, skip to Question 12.

11. Are you in compliance with the flood-proofing provisions in 310 CMR 30.701(2)? (See Section 17C in the Instructions.)

☐ Yes\*

☐ No

\*If Yes, skip to Question 12.

11a. Explain why you are not in compliance with the flood-proofing provisions in 310 CMR 30.701(2).

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12. What type of IWPS do you have? (Check all that apply.)

☐ Fully Automated Industrial Wastewater Pretreatment System (FAIWPS)

☒ Continuous Discharge IWPS

☒ Batch IWPS

13. Is the IWPS exempt from classification? (See Section 17C in the Instructions.)

☐ Yes\*

☒ No

\*If Yes, skip to Question 14.

13a. What is the classification of this IWPS? (See 257 CMR 2.13: Classification of Wastewater Treatment Facilities.)

☐ Class 1I

☒ Class 2I

☐ Class 3I

☐ Class 4I

☐ Class 5 or 6C

☐ Class 1M

☐ Class 2M

☐ Class 3M

☐ Class 4M



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**Additional IWPS Information** (continued)

13b. How was the IWPS' classification determined?

- ☐ 13b1. In accordance with the requirements in 314 CMR 7.05(2)(g) 4. c. or d.  
☒ 13b2. By the Board of Certification of Operators of Wastewater Treatment Facilities  
☐ 13b3. Both

14. Is the IWPS staffed in accordance with the requirements of 314 CMR 7.05(2)(g) 5? (See Section 17C in the Instructions.)

☒ Yes\*

☐ No

\*If Yes, skip to Question 15.

14a. Explain why the IWPS is not staffed in accordance with 314 CMR 7.05(2)(g) 5.

15. Is this your first permit application under Permit Category BWP IW 38 or BWP IW 39 for the IWPS? Or, is this application a request for modification of the IWPS that currently has a BWP IW 38 or BWP IW 39 permit?

☒ Yes\*

☐ No

\*If Yes, you need to submit as an attachment the process flow diagram and description of the principal treatment processes for your IWPS.

16. How many attachments are included with this application in response to Question 15?

2: See Attachments D and E

Number of Attachments

17. Have your sewer connection and IWPS been designed and constructed in compliance with the design and construction standards as set forth in 314 CMR 7.05(2)(g)3?

☒ Yes

☐ No\*

\*If No, skip to Question 17b.

17a. What is the Massachusetts Registered Professional Engineer (MAPE) signature date on the engineering plans?

1-4-08

Date

Skip to Question 18.



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17b. Explain why your sewer connection and IWPS have not been designed and constructed in compliance with the design and construction standards as set forth in 314 CMR 7.05(2)(g)3.

18. Provide the name of the Massachusetts Registered Professional Engineer (MAPE) who reviewed, stamped, and signed your engineering plans:

Christopher A. Walton

18a. Name

39510

18c. Mass. P.E. License Number

(781) 273-2500

18b. Phone Number

Civil

18d. Mass. P.E. Specialty

19. Do you have an IWPS operation and maintenance manual that complies with the procedures and other requirements in 314 CMR 7.05(2)(g)6.?

☒ Yes\*

☐ No

\*If Yes, skip to Question 20.

19a. Explain why you do not have an IWPS operation and maintenance manual.

20. Are you keeping your IWPS operation and maintenance manual current?

☒ Yes

☐ No

21. Are you implementing your IWPS operation and maintenance plan manual?

☒ Yes

☐ No





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**Instructions:** For the following groups of pollutants, check all that you know to be present in your industrial wastewater before pretreatment, and provide concentrations for the specific pollutants in the checked group(s).

☒ **100. Volatiles**

For all Volatile Organic Compounds (VOCs), provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
101. acrolein	Below Detection Limit (BDL) ug/L
102. acrylonitrile	BDL ug/L
103. benzene	BDL ug/L
104. bis (chloromethyl) ether	BDL ug/L
105. bromoform	BDL ug/L
106. carbon tetrachloride	BDL ug/L
107. chlorobenzene	BDL ug/L
108. chlorodibromomethane	BDL ug/L
109. chloroethane	BDL ug/L
110. 2-chloroethylvinyl ether	BDL ug/L
111. chloroform	BDL ug/L
112. dichlorobromomethane	BDL ug/L
113. dichlorodifluoromethane	BDL ug/L
114. 1,1-dichloroethane	BDL ug/L
115. 1,2-dichloroethane	BDL ug/L
116. 1,1-dichloroethylene	BDL ug/L
117. 1,2-dichloropropane	BDL ug/L
118. 1,2-dichloropropylene	BDL ug/L
119. ethylbenzene	BDL ug/L
120. methyl bromide	BDL ug/L
121. methyl chloride	BDL ug/L



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**100. Volatiles (continued)**

Pollutant Name	Concentration
122. methylene chloride	BDL ug/L
123. 1,1,2,2-tetrachloroethane	BDL ug/L
124. tetrachloroethylene	BDL ug/L
125. toluene	BDL ug/L
126. 1,2-trans-dichloroethylene	BDL ug/L
127. 1,1,1-trichloroethane	BDL ug/L
128. 1,1,2-trichloroethane	BDL ug/L
129. trichloroethylene	BDL ug/L
130. trichlorofluoromethane	BDL ug/L
131. vinyl chloride	BDL ug/L

☒ **200. Acid Compounds**

For all Acid Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
201. 2-chlorophenol	BDL ug/L
202. 2,4-dichlorophenol	BDL ug/L
203. 2,4-dimethylphenol	BDL ug/L
204. 4,6-dinitro-o-cresol	BDL ug/L
205. 2,4-dinitrophenol	BDL ug/L
206. 2-nitrophenol	BDL ug/L
207. 4-nitrophenol	BDL ug/L
208. p-chloro-m-cresol	BDL ug/L
209. pentachlorophenol	BDL ug/L
210. phenol	BDL ug/L
211. 2,4,6-trichlorophenol	BDL ug/L





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☒ **300. Base/Neutral Compounds**

For all Base/Neutral Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
301. acenaphthene	BDL ug/L
302. acenaphthylene	BDL ug/L
303. anthracene	BDL ug/L
304. benzidine	BDL ug/L
305. benzo(a)anthracene	BDL ug/L
306. benzo(a)pyrene	BDL ug/L
307. 3,4-benzofluoranthene	BDL ug/L
308. benzo(ghi)perylene	BDL ug/L
309. benzo(k)fluoranthene	BDL ug/L
310. bis(2-chloroethoxy)methane	BDL ug/L
311. bis(2-chloroethyl)ether	BDL ug/L
312. bis(2-chloroisopropyl)ether	BDL ug/L
313. bis(2-ethylhexyl)phthalate	BDL ug/L
314. 4-bromophenyl phenyl ether	BDL ug/L
315. butylbenzyl phthalate	BDL ug/L
316. 2-chloronaphthalene	BDL ug/L
317. 4-chlorophenyl phenyl ether	BDL ug/L
318. chrysene	BDL ug/L
319. dibenzo(a,h)anthracene	BDL ug/L
320. 1,2-dichlorobenzene	BDL ug/L
321. 1,3-dichlorobenzene	BDL ug/L
322. 1,4-dichlorobenzene	BDL ug/L
323. 3,3'-dichlorobenzidine	BDL ug/L



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**300. Base/Neutral Compounds (continued)**

Pollutant Name	Concentration
324. diethyl phthalate	BDL ug/L
325. dimethyl phthalate	BDL ug/L
326. di-n-butyl phthalate	BDL ug/L
327. 2,4-dinitrotoluene	BDL ug/L
328. 2,6-dinitrotoluene	BDL ug/L
329. di-n-octyl phthalate	BDL ug/L
330. 1,2-diphenylhydrazine (as azobenzene)	BDL ug/L
331. fluoranthene	BDL ug/L
332. fluorine	BDL ug/L
333. hexachlorobenzene	BDL ug/L
334. hexachlorobutadiene	BDL ug/L
335. hexachlorocyclopentadiene	BDL ug/L
336. hexachloroethane	BDL ug/L
337. indeno(1,2,3-cd)pyrene	BDL ug/L
338. isophorone	BDL ug/L
339. naphthalene	BDL ug/L
340. nitrobenzene	BDL ug/L
341. N-nitrosodimethylamine	BDL ug/L
342. N-nitrosodi-n-propylamine	BDL ug/L
343. N-nitrosodiphenylamine	BDL ug/L
344. phenanthrene	BDL ug/L
345. pyrene	BDL ug/L
346. 1,2,4-trichlorobenzene	BDL ug/L



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☒ **400. Pesticides**

For all Pesticides, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
401. aldrin	0.111 ug/L
402. alpha-BHC	BDL ug/L
403. beta-BHC	BDL ug/L
404. gamma-BHC	BDL ug/L
405. delta-BHC	BDL ug/L
406. chlordane	BDL ug/L
407. 4,4'-DDT	BDL ug/L
408. 4,4'-DDE	BDL ug/L
409. 4,4'-DDD	BDL ug/L
410. dieldrin	BDL ug/L
411. alpha-endosulfan	BDL ug/L
412. beta-endosulfan	BDL ug/L
413. endosulfan sulfate	BDL ug/L
414. endrin	BDL ug/L
415. endrin aldehyde	BDL ug/L
416. heptachlor	BDL ug/L
417. heptachlor epoxide	BDL ug/L
418. PCB-1242	BDL ug/L
419. PCB-1254	BDL ug/L
420. PCB-1221	BDL ug/L
421. PCB-1232	BDL ug/L
422. PCB-1248	BDL ug/L
423. PCB-1260	BDL ug/L



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**400. Pesticides**

**Pollutant Name**

**Concentration**

424. PCB-1016

BDL

ug/L

425. toxaphene

BDL

ug/L

**500. Total Toxic Pollutants\***

0.111 [1]

ug/L

\*Use this total in your answer to Question 6b in Section B of the BWP IW 38 & BWP IW 39 Permit for Industrial Sewer User application

**[1] Sampling data from combined outfall S01 and CO1 (Refer to Attachment A)**



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Facility ID# (if known)

Permit Code

**Instructions:** For the following groups of pollutants, check all that you know to be present in your industrial wastewater before pretreatment, and provide concentrations for the specific pollutants in the checked group(s).

☒ **100. Volatiles**

For all Volatile Organic Compounds (VOCs), provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
101. acrolein	Below Detection Limit (BDL) ug/L
102. acrylonitrile	BDL ug/L
103. benzene	BDL ug/L
104. bis (chloromethyl) ether	BDL ug/L
105. bromoform	2.5 ug/L
106. carbon tetrachloride	BDL ug/L
107. chlorobenzene	BDL ug/L
108. chlorodibromomethane	4.6 ug/L
109. chloroethane	BDL ug/L
110. 2-chloroethylvinyl ether	BDL ug/L
111. chloroform	3.8 ug/L
112. dichlorobromomethane	5.6 ug/L
113. dichlorodifluoromethane	BDL ug/L
114. 1,1-dichloroethane	BDL ug/L
115. 1,2-dichloroethane	BDL ug/L
116. 1,1-dichloroethylene	BDL ug/L
117. 1,2-dichloropropane	BDL ug/L
118. 1,2-dichloropropylene	BDL ug/L
119. ethylbenzene	BDL ug/L
120. methyl bromide	BDL ug/L
121. methyl chloride	BDL ug/L



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**100. Volatiles (continued)**

Pollutant Name	Concentration
122. methylene chloride	BDL ug/L
123. 1,1,2,2-tetrachloroethane	BDL ug/L
124. tetrachloroethylene	BDL ug/L
125. toluene	BDL ug/L
126. 1,2-trans-dichloroethylene	BDL ug/L
127. 1,1,1-trichloroethane	BDL ug/L
128. 1,1,2-trichloroethane	BDL ug/L
129. trichloroethylene	BDL ug/L
130. trichlorofluoromethane	BDL ug/L
131. vinyl chloride	BDL ug/L

☒ **200. Acid Compounds**

For all Acid Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
201. 2-chlorophenol	BDL ug/L
202. 2,4-dichlorophenol	BDL ug/L
203. 2,4-dimethylphenol	BDL ug/L
204. 4,6-dinitro-o-cresol	BDL ug/L
205. 2,4-dinitrophenol	BDL ug/L
206. 2-nitrophenol	BDL ug/L
207. 4-nitrophenol	BDL ug/L
208. p-chloro-m-cresol	BDL ug/L
209. pentachlorophenol	BDL ug/L
210. phenol	BDL ug/L
211. 2,4,6-trichlorophenol	BDL ug/L



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☒ **300. Base/Neutral Compounds**

For all Base/Neutral Compounds, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
301. acenaphthene	BDL ug/L
302. acenaphthylene	BDL ug/L
303. anthracene	BDL ug/L
304. benzidine	BDL ug/L
305. benzo(a)anthracene	BDL ug/L
306. benzo(a)pyrene	BDL ug/L
307. 3,4-benzofluoranthene	BDL ug/L
308. benzo(ghi)perylene	BDL ug/L
309. benzo(k)fluoranthene	BDL ug/L
310. bis(2-chloroethoxy)methane	BDL ug/L
311. bis(2-chloroethyl)ether	BDL ug/L
312. bis(2-chloroisopropyl)ether	BDL ug/L
313. bis(2-ethylhexyl)phthalate	BDL ug/L
314. 4-bromophenyl phenyl ether	BDL ug/L
315. butylbenzyl phthalate	BDL ug/L
316. 2-chloronaphthalene	BDL ug/L
317. 4-chlorophenyl phenyl ether	BDL ug/L
318. chrysene	BDL ug/L
319. dibenzo(a,h)anthracene	BDL ug/L
320. 1,2-dichlorobenzene	BDL ug/L
321. 1,3-dichlorobenzene	BDL ug/L
322. 1,4-dichlorobenzene	BDL ug/L
323. 3,3'-dichlorobenzidine	BDL ug/L



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**300. Base/Neutral Compounds (continued)**

<b>Pollutant Name</b>	<b>Concentration</b>
324. diethyl phthalate	BDL ug/L
325. dimethyl phthalate	BDL ug/L
326. di-n-butyl phthalate	BDL ug/L
327. 2,4-dinitrotoluene	BDL ug/L
328. 2,6-dinitrotoluene	BDL ug/L
329. di-n-octyl phthalate	BDL ug/L
330. 1,2-diphenylhydrazine (as azobenzene)	BDL ug/L
331. fluoranthene	BDL ug/L
332. fluorine	BDL ug/L
333. hexachlorobenzene	BDL ug/L
334. hexachlorobutadiene	BDL ug/L
335. hexachlorocyclopentadiene	BDL ug/L
336. hexachloroethane	BDL ug/L
337. indeno(1,2,3-cd)pyrene	BDL ug/L
338. isophorone	BDL ug/L
339. naphthalene	BDL ug/L
340. nitrobenzene	BDL ug/L
341. N-nitrosodimethylamine	BDL ug/L
342. N-nitrosodi-n-propylamine	BDL ug/L
343. N-nitrosodiphenylamine	BDL ug/L
344. phenanthrene	BDL ug/L
345. pyrene	BDL ug/L
346. 1,2,4-trichlorobenzene	BDL ug/L





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☒ **400. Pesticides**

For all Pesticides, provide concentrations in micrograms per liter (ug/L):

Pollutant Name	Concentration
401. aldrin	BDL ug/L
402. alpha-BHC	BDL ug/L
403. beta-BHC	BDL ug/L
404. gamma-BHC	BDL ug/L
405. delta-BHC	BDL ug/L
406. chlordane	BDL ug/L
407. 4,4'-DDT	BDL ug/L
408. 4,4'-DDE	BDL ug/L
409. 4,4'-DDD	BDL ug/L
410. dieldrin	BDL ug/L
411. alpha-endosulfan	BDL ug/L
412. beta-endosulfan	BDL ug/L
413. endosulfan sulfate	BDL ug/L
414. endrin	BDL ug/L
415. endrin aldehyde	BDL ug/L
416. heptachlor	BDL ug/L
417. heptachlor epoxide	BDL ug/L
418. PCB-1242	BDL ug/L
419. PCB-1254	BDL ug/L
420. PCB-1221	BDL ug/L
421. PCB-1232	BDL ug/L
422. PCB-1248	BDL ug/L
423. PCB-1260	BDL ug/L



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**400. Pesticides**

**Pollutant Name**

**Concentration**

424. PCB-1016

BDL

ug/L

425. toxaphene

BDL

ug/L

**500. Total Toxic Pollutants\***

16.5 [1]

ug/L

\*Use this total in your answer to Question 6b in Section B of the BWP IW 38 & BWP IW 39 Permit for Industrial Sewer User application

**[1] Sampling data from outfall NS02 following pretreatment (Refer to Attachment A)**

## Attachment A

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### Wastewater Sampling Results

- Main Pretreatment Facility
- ATC Pretreatment System

**I. MAIN PRETREATMENT FACILITY SAMPLING DATA**

---

**S01 Combined Discharge**

**C01 Discharge from Main Pretreatment Facility**

**C01A Main Process Tank**

**C01B Concentrated Copper/Nickel Rinses**

**C01C Concentrated Tin Rinses**

**2 ATC PRETREATMENT SYSTEM SAMPLING DATA**

---

**NS02 Discharge from ATC Pretreatment System**

**C02 ATC Industrial Wastewater**

Outfall S01  
Combined Discharge (Main Pretreatment System Effluent and Sanitary Wastewater)  
2007 Wastewater Sampling Results

Parameter	Units	POTW Discharge Limitation	Sample Type	Sampling Frequency	1stQ 2007	2ndQ 2007	3rdQ 2007	4thQ 2007
<b>Metals, Cyanide and Phenols</b>								
Aluminum	mg/L	no limit	composite	quarterly	0.31	0.12	0.11	ND
Antimony	mg/L	no limit	composite	quarterly	ND	ND	ND	ND
Arsenic	mg/L	0.42	composite	quarterly	ND	ND	ND	ND
Beryllium	mg/L	0.12	composite	quarterly	ND	ND	ND	ND
Cadmium	mg/L	0.10	composite	quarterly	ND	ND	ND	ND
Chromium	mg/L	0.77	composite	quarterly	ND	ND	ND	ND
Copper	mg/L	0.30	composite	quarterly	ND	ND	ND	ND
Lead	mg/L	0.10	composite	quarterly	0.096	0.039	0.047	0.057
Mercury	mg/L	0.0007	composite	quarterly	ND	ND	ND	ND
Nickel	mg/L	0.60	composite	quarterly	ND	ND	ND	ND
Selenium	mg/L	0.81	composite	quarterly	ND	ND	ND	ND
Silver	mg/L	0.25	composite	quarterly	ND	ND	ND	ND
Thallium	mg/L	0.93	composite	quarterly	ND	ND	ND	ND
Zinc	mg/L	3.70	composite	quarterly	0.092	ND	ND	0.056
Cyanide	mg/L	0.45	grab	quarterly	ND	ND	ND	ND
Phenols, Total	mg/L	no limit	grab	quarterly	0.20	ND	0.05	ND
<b>Toxic Pollutants</b>								
TTO (624&625)	µg/L	2,130	grab	annually	370.1			
EPA 624 (volatiles)	µg/L	see TTO limit	grab	annually	370.1			
EPA 625 (SVOCs)	µg/L	see TTO limit	composite	annually	0.111 [2]			
<b>Oil &amp; Grease and pH</b>								
Oil & Grease	mg/L	100	grab	quarterly	40	17	16	13
pH	su	6.0 - 9.0	cont.	cont.	6-9	6-9	6-9	6-9
<b>Other Pollutants</b>								
TSS	mg/L	350	composite	quarterly	53	32	32	34
Nitrogen, Ammonia	mg/L	50	composite	quarterly	30.1	24.6	18.3	14.6
Phosphorus, Total	mg/L	25	composite	quarterly	21	3.7	3.0	2.1
COD	mg/L	no limit	composite	quarterly	300	210	260	160
BOD <sub>5</sub>	mg/L	350	composite	quarterly	220	260	240	150

Notes:  
ND = Not Detected  
[1] Acetone  
[2] Aldrin

**Internall Outfall C01  
Main Pretreatment Facility  
Wastewater Sampling Results**

Parameter	Units	Sample Type	Number of Samples	Maximum Concentration	Average Concentration	Sample Dates
<b>Metals, Cyanide and Phenols</b>						
Copper	mg/L	grab	7	0.05	0.04	9/4-10/31/2007
Nickel	mg/L	grab	7	0.06	0.04	9/4-10/31/2007
Lead	mg/L	grab	7	0.02	0.01	9/4-10/31/2007
Antimony	mg/L	composite	1	ND		12/18/2007
Arsenic	mg/L	composite	1	ND		12/18/2007
Beryllium	mg/L	composite	1	ND		12/18/2007
Cadmium	mg/L	composite	1	ND		12/18/2007
Chromium	mg/L	composite	1	ND		12/18/2007
Mercury	mg/L	composite	1	ND		12/18/2007
Selenium	mg/L	composite	1	ND		12/18/2007
Silver	mg/L	composite	1	ND		12/18/2007
Thallium	mg/L	composite	1	ND		12/18/2007
Zinc	mg/L	composite	1	ND		12/18/2007
Cyanide	mg/L	grab	1	0.039		12/18/2007
<b>Toxic Pollutants</b>						
TTO (624&625)	µg/L			270		
EPA 624 (volatiles)	µg/L	grab	1	270 [1]		12/18/2007
EPA 625 (SVOCs)	µg/L	grab	1	ND		12/18/2007
<b>Other Pollutants</b>						
TSS	mg/L	composite	1	12		12/18/2007
BOD <sub>5</sub>	mg/L	composite	12	380	188	3/30-11/12/2007
Phosphorus	mg/L	composite	91	5.0	1.6	2/5 - 12/10/2007

Notes:  
ND = Not Detected  
[1] Acetone

**Internall Outfall C01A  
Main Pretreatment Facility  
Main Process Tank  
Wastewater Sampling Results**

Parameter	Units	Sample Type	Number of Samples	Maximum Concentration	Average Concentration	Sample Dates
Copper	mg/L	grab	40	13.63	3.17	11/1-11/30/2007
Nickel	mg/L	grab	40	2.86	0.50	11/1-11/30/2007
Lead	mg/L	grab	40	0.16	0.02	11/1-11/30/2007

**Internall Outfall C01B  
Main Pretreatment Facility  
Concentrated Copper/Nickel Rinses  
2007 Wastewater Sampling Results**

Parameter	Units	Sample Type	Number of Samples	Maximum Concentration	Average Concentration	Sample Dates
Formaldehyde	mg/L	grab	3	5,900	2,309	10/5 - 12/12/2007
Copper	mg/L	estimate			50-1000	
Nickel	mg/L	estimate			50-1000	



**Internall Outfall C01C  
Main Pretreatment Facility  
Concentrated Tin Rinses  
2007 Wastewater Sampling Results**

Parameter	Units	Sample Type	Number of Samples	Maximum Concentration	Average Concentration	Sample Dates
Thiourea	mg/L	grab	3	182	176	12/6/07, 12/7/07, 12/11/07

Outfall NS02  
Advanced Technology Center - Fab 4 (ATC) Building  
2007 Wastewater Sampling Results

Parameter	Units	POTW Discharge Limitation	Sample Type	Sampling Frequency	January-June 2007	July-December 2007
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Metals, Cyanide and Phenols

Antimony	mg/L	no limit	composite	semiannual	ND	ND
Arsenic	mg/L	0.42	composite	semiannual	ND	ND
Beryllium	mg/L	0.12	composite	semiannual	ND	ND
Cadmium	mg/L	0.02	composite	semiannual	ND	ND
Chromium	mg/L	0.77	composite	semiannual	ND	ND
Copper	mg/L	0.3	composite	semiannual	0.014	0.025
Lead	mg/L	0.08	composite	semiannual	ND	ND
Mercury	mg/L	0.0007	composite	semiannual	ND	ND
Nickel	mg/L	0.37	composite	semiannual	ND	ND
Selenium	mg/L	0.81	composite	semiannual	ND	ND
Silver	mg/L	0.01	composite	semiannual	ND	ND
Thallium	mg/L	0.93	composite	semiannual	ND	ND
Zinc	mg/L	0.5	composite	semiannual	ND	ND
Cyanide	mg/L	0.23	grab	semiannual	ND	ND
Phenols, Total	mg/L	no limit	grab	semiannual	ND	ND

Toxic Pollutants

TTO (624&625)	µg/L	2,130			32.5	ND
EPA 624 (volatiles)	µg/L	see TTO limit	grab	semiannual	32.5 [1]	ND
EPA 625 (SVOCs)	µg/L	see TTO limit	composite	semiannual	ND	ND

Oil & Grease and pH

Oil & Grease	mg/L	100	grab	semiannual	< 4.4	< 4
pH	su	6.0 - 9.0	cont.	cont.	6-9	6-9

Other Pollutants

TSS	mg/L	no limit	composite	semiannual	< 5	< 5
Nitrogen, Ammonia	mg/L	no limit	composite	semiannual	1.42	1.40
Phosphorus, Total	mg/L	no limit	composite	semiannual	0.02	0.13
COD	mg/L	no limit	composite	semiannual	250	85
BOD <sub>5</sub>	mg/L	no limit	composite	semiannual	< 10	78

Notes:

ND = Not Detected

[1] Acetone = 16 mg/L

**Internall Outfall C02  
Advanced Technology Center - Fab 4 (ATC) Building  
ATC Industrial Wastewater**

Parameter	Units	Sample Type	Number of Samples	Maximum Concentration	Average Concentration	Sample Dates
Copper	mg/L	composite	1	0.160	n/a	5/6/2005
Nickel	mg/L	composite	1	0.143	n/a	5/6/2005



## **Attachment B**

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### **POTW Sewer Use Permits**

- **Main Pretreatment Facility**
- **ATC Pretreatment System**

**COPY**



11-3-06

K. LeMaire Copy  
K. LeMaire

**City of Marlborough  
Westerly Wastewater Treatment Plant  
303 Boundary Street  
Marlborough, MA 01752**

November 2, 2006

Sarita Croce  
Rohm and Haas Electronic Materials, LLC  
455 Forest Street  
Marlborough, MA 01752


Dear Sarita Croce;

Enclosed is your updated permit. All conditions of this permit shall take effect on the Effective Date as stated on the permit.

The only exception is the BODs, Daily Maximum Limit, which will become effective at a later date.

If you have any questions, please contact me @508-624-6919.

Respectfully,

  
Roland Gould, IPP Coordinator

**EFFECTIVE DATE:** 12/04/06  
**EXPIRATION DATE:** 12/03/2011

**PERMIT #** SIU4817950

**Facility Name:** Rohm and Haas Electronic Materials, LLC  
455 Forest Street  
Marlborough, MA 01752

## **I. DEFINITIONS**

Unless the context clearly indicates otherwise, the meaning of the terms or abbreviations used in this discharge permit shall be defined in exhibit " A ".

## **II. GENERAL CONDITIONS**

a. All discharges authorized herein shall be consistent with the terms of this permit and the Marlborough Sewer Regulations, Section 161-1 et. seq. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and / or criminal penalties as provided for in Marlborough's Sewer Regulations, and applicable state and federal clean water laws. Modifications, additions and / or expansions that increase or decrease the quality and / or quantity of wastewater discharged to the Wastewater Facilities must be reported to the City of Marlborough's Industrial Pretreatment Coordinator, in writing, and this permit may then be modified or reissued to reflect such changes. No change in the permittee's discharge may be made unless reported to, and approved by the City. In no case shall new connections, increased flows, or significant changes in effluent quantity and / or quality be permitted, unless permitted by the City.

b. This permit may be modified, suspended, or revoked in whole or in part during its term, without limitation, for the following reasons:

1. Violation of any term or condition of this permit;
2. Obtaining permit by misrepresentation or failure to disclose fully all-relevant facts.
3. A change in conditions or the existence of a condition which requires either a temporary or permanent reduction or elimination of the authorized discharge.
4. Promulgation of a more stringent pretreatment standard by State or Federal agencies having jurisdiction over receiving waters. Permits modified under this section may include implementation schedules, self monitoring requirements, revised effluent limitations, and other provisions necessary to assure compliance.
5. Violation of the Marlborough Sewer Regulations, or other applicable laws.

c. The permittee shall permit the City of Marlborough Department of Public Works and

other duly authorized Industrial Pretreatment personnel, upon the presentation of proper credentials, the right of entry referenced in the Marlborough Sewer Regulations, including without limitation, the right:

1. To enter upon permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit during business hours;
2. To have access to and copy any records required to be kept under the terms and conditions of this permit;
3. To inspect any monitoring equipment or monitoring method required in this permit; or
4. To sample at any intake, wastewater facility, outfall, or other location related to the facilities operations.

d. In the event that the permittee undergoes a sale of assets or major change in ownership of either its corporate voting stock or control of its corporate stock or of the building to which this permit relates, then and in any of said events, the permittee shall notify the City of Marlborough's Pretreatment Coordinator of such change. Failure to so notify the Pretreatment Coordinator within 30 days of such event shall void the permit at the option of the City of Marlborough. In the event of such transfer, the Transferee shall forthwith enter into a new permit with the City, which embodies the terms of this permit as may be amended or modified.

e. All pretreatment facilities shall be operated in a manner consistent with the Marlborough Sewer Use Regulations and any applicable Federal, State, or local regulations and guidelines. The Permittee shall at all times maintain in good working order and operate any necessary facilities or systems of controls installed or utilized to achieve continual compliance with the terms and conditions of this permit, the Marlborough Sewer Regulations, and applicable laws.

f. The issuance of this permit does not convey any property rights in either its real or personal property, or any exclusive privileges; nor does it authorize or relieve the permittee of any liability for any injury to private property or any invasion of personal rights; nor any infringement of Federal, State, or local laws or regulations; nor does it waive the necessity of obtaining any State or Federal assent required by law for the discharge authorized herein;

g. The provisions of this permit are severable and the invalidity of any condition or subdivision thereof shall not make void any other condition or subdivision thereof.

h. **Non-Compliance:** In the event the permittee is unable to comply with any of the conditions of this permit, the Marlborough Sewer Regulations, or applicable laws, the permittee shall provide the City of Marlborough's Pretreatment Coordinator with the following information, in writing, within five (5) days after commencement of such occurrence;

1. Cause of non-compliance;
2. Anticipated time the condition of non-compliance is expected to continue, or if



- such conditions have been corrected, the duration of the period of non-compliance;
- 3. Steps taken by the permittee to reduce and eliminate the non-complying discharge;
- 4. Steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

The City reserves all rights and remedies that it has under or by reason of any statutory law, ordinance, regulation, or common law, or other applicable law, to cure any breach of this agreement or to enforce any penalty for the breach thereof.

i. **Emergency Action - Electric Power Failure:** The permittee shall provide an alternative source of power for the operation of its pretreatment facilities or shut down its industrial operation during a power failure. The alternative power supply, whether from a generating unit located at the plant site or purchased from an independent source of electricity, must be separate from the existing power source used to operate the pretreatment facilities.

j. **Bypasses, Slug Loads, Spills:** Slug loads, spills or bypass of any discharge from its pretreatment facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except where unavoidable to prevent loss of life. The permittee shall follow the requirements in 40 CFR Part 403, including section 403.16 (c) (3) which includes the verbal notification of the Pretreatment Coordinator within 24 hours, and in writing, of each such slug, spill or bypass in accordance with the procedure specified in part: "h. **Non-Compliance**" of this same section of this permit.

k. **Revisions:** The City of Marlborough reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, management practices, operational procedures, schedule or compliance, or other provisions which may be authorized under Federal, State or City law in order to bring all such discharges into compliance with these acts.

l. **Reapplication:** If the permittee desires to continue to discharge after the expiration of this permit, it shall reapply on the application forms then in use at least one hundred eighty (180) days before the Permit expires. Under no circumstances shall the permittee continue to discharge after the expiration of the Permit.

### III. **SPECIAL CONDITIONS**

a. The permittee is required to connect their wastewater facilities to the public sewer in accordance with the provisions of the Marlborough Sewer Use regulations, and other applicable laws.

b. The Permittee is authorized to discharge only wastewater whose effluent and other characteristics shall not:

- (i) exceed the values listed in Section VII. MONITORING REQUIREMENTS or,

(ii) otherwise cause a violation of the Marlborough Sewer Regulations and state and federal pretreatment laws.

c. **Solids Disposal:** Collected screenings, sludges and other solids removed from liquid wastes shall not be allowed entry into the City's sewer collection system.

#### IV. COSTS AND CHARGES

a. **Summary of Costs and Charges:** In consideration of the wastewater disposal services provided by the City under the terms of this permit, the permittee shall pay a user charge at established rates.

1. **Connection Costs:** The entire cost of connecting the permittee's wastewater facilities to the City's system shall be paid by the Permittee or otherwise provided for to the satisfaction of the City.
2. **Late Charges:** All billings shall be subject to nine percent per annum late charge if not paid within thirty (30) days of the billing date.
3. **Payments:** All payments shall be made by check drawn payable to the order of the City of Marlborough and mailed to the DPW Municipal Garage, 135 Neil Street, Marlborough, MA 01752.

b. **Penalties:** In addition, the permittee shall pay all penalties or fines, and any related costs, expenses, and technical, consulting and legal fees, incurred by or claimed against the City by any state or federal agency resulting from permittee's noncompliance.

#### V. REPORTING AND MONITORING

a. At each connection between the permittee's sewer system and the City's collection system the permittee shall install flow meters(s), composite sampler(s), sampling station, or other device(s) that shall measure sample and record the quantity / quality of wastewater flow from the industry. All monitoring devices and sampling stations must be approved by the City of Marlborough. The permittee shall maintain records of all information resulting from any monitoring activities required herein. The permittee shall accept the estimates of quantities of wastewater as established by the Industrial Pretreatment Coordinator during all periods in which the meters fail to measure the wastewater flow correctly.

b. The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements.

c. The Permittee shall provide the above records and shall demonstrate the accuracy of the monitoring devices upon request of the City of Marlborough.

d. The Permittee shall analyze any samples as may be required by the City of Marlborough to ensure effluent quality control.

e. If the Permittee monitors or analyzes any wastewater parameters more frequently than is required by this permit, the results of such monitoring and analysis shall also be provided to the City of Marlborough's IPP coordinator.

f. **Sampling and Analysis:** The sampling, preservation, handling, and analytical methods used must conform to the Approved Methods in **40 CFR 136.**

g. All limitations as given in this permit are conditional, and may be revised, should the concentrations prove detrimental to the proper operation and maintenance of the Marlborough Treatment Facilities. In addition to costs and charges under Section IV a. and IV b., upon notification to reduce the specified concentrations, the Permittee shall be responsible for all costs incurred at the Treatment Facilities, which resulted because of excessive concentrations.

h. **All industries are required to resample and analyze for any parameter that is in violation of their permit within 30 (thirty) days, and submit the test results to the IPP coordinator.**

## **VI IMPLEMENTATION SCHEDULE**

### **a. The permittee shall:**

1. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
2. Operate a pH meter with a continuous chart recorder which shall be maintained and calibrated at least biweekly.
3. Operate a flow meter for continuous measurement of discharge volume, which shall be calibrated at least annually.

### **b. Pretreatment**

The permittee shall achieve compliance with the final effluent limitations as delineated below.

1. This facility is subject to the terms and conditions set forth in 40 CFR part 403.

## VII. MONITORING REQUIREMENTS

Monitoring Facilities -- Outfall # S01: Located in manhole in exit driveway and marked as S01.

The Permittee shall collect and analyze representative samples for listed parameters not less frequently than the following schedule:

<u>Parameter</u>	<u>Units</u>	<u>Daily Maximum Limit</u>	<u>Sample Type</u>	<u>Sample Freq</u>
Aluminum	mg/l	NLS	C	1/Q
Ammonia, nitrogen	mg/l	50.0	C	1/Q
Antimony	mg/l	NLS	C	1/Q
Arsenic	mg/l	0.42	C	1/Q
BOD <sub>5</sub>	mg/l	350	C	1/Q
Beryllium	mg/l	0.12	C	1/Q
COD	mg/l	NLS	C	1/Q
Cadmium	mg/l	0.10	C	1/Q
Chromium	mg/l	0.77	C	1/Q
Copper	mg/l	0.30	C	1/Q
Cyanide	mg/l	0.45	G	1/Q
Flow, Process**	gpd	90,000	D	CONTINUOUS
Flow, Total	gpd	100,000	D	CONTINUOUS
Lead	mg/l	0.10	C	1/Q
Mercury	mg/l	0.0007	C	1/Q
Nickel	mg/l	0.60	C	1/Q
Oil and grease	mg/l	100	G	1/Q
Phenol	mg/l	NLS	G	1/Q
Selenium	mg/l	0.81	C	1/Q
Silver	mg/l	0.25	C	1/Q
EPA 624, 625*	mg/l	2.13	G/C	1/Y
Thallium	mg/l	0.93	C	1/Q
Total Phosphorus	mg/l	25.0	C	1/Q
TSS	mg/l	350	C	1/Q
Zinc	mg/l	3.70	C	1/Q
PH	SU	6.0 - 9.0	D	CONTINUOUS

\* EPA 624 is to be done on a grab sample; EPA 625 is done on a composite sample.

\*\* Measured at outfall CO1.

**Abbreviations:** C = Composite, G = Grab, D = Daily, NLS = No Limit Set,  
Q = Quarterly, Y = Yearly (Annually)

- A. All Weekly reports are due no later than three (3) weeks from the sampling date.
- B. All Monthly reports are due by the 15<sup>th</sup> day of the following month.
- C. All Quarterly reports are due no later than the 15<sup>th</sup> day of April, July, October and January.\*
- D. All Semi-annual reports are due by the 15<sup>th</sup> day of June and December.
- E. All Annual reports are to be received no later than December 31st.

**\*Example: If there is a requirement for quarterly phosphorus sampling, a sample has to be taken in January, February or March and the results are to be received by the IPP coordinator by April 15<sup>th</sup>. This scenario is the same for all calendar quarters.**

#### **Municipal Limitations / Conditions / General comments**

- 1. Adhere to the City of Marlborough's Sewer Regulations, and all state and federal laws.**
- 2. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.**
- 3. Ensure that the pH meter with a continuous chart recorder is calibrated at least biweekly.**
- 4. Ensure that the flow meter for continuous measurement of discharge volume is calibrated at least annually.**
- 5. The wastewater discharge shall not contain a visible oil sheen or foam at any time. In addition, the wastewater discharge shall not contain any foaming agents in quantities that would manifest themselves either in the immediate wastewater discharge or in downstream locations, including without limitation, the City's wastewater treatment plant or in downstream waters.**
- 6. It shall be considered a violation of this permit if any foaming agents, or other wastewater constituents result in, or contribute to, any adverse impact on the City's wastewater treatment facility, its sewer collection system, the receiving waters, or any other location below SO1.**

**Permit #: SIU4817950**

**Effective date: 12/04/06**  
**Expiration date: 12/03/2011**

**This page is considered part of the discharge permit.**

**CITY OF MARLBOROUGH  
AUTHORIZATION TO DISCHARGE TO THE EASTERLY / WESTERLY  
WASTEWATER TREATMENT FACILITY**

**Company Name: Rohm and Haas Electronic Materials, LLC**

**Address: 455 Forest Street**

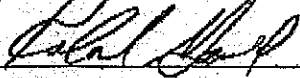
**Telephone Number: 508-481-7950**

Rohm and Haas Electronic Materials, LLC is authorized by the Department of Public Works to discharge wastewater from 455 Forest Street, Marlborough, MA., to the Marlborough Westerly WWTP in accordance with the following conditions.

**Adhere to all of the conditions in your Industrial Wastewater Discharge Permit # SIU4817950**

**This permit consists of 11 pages including effluent limitations, monitoring requirements and general conditions etc.**

**Signed this 3 day of November, 2006**



**Roland Gould  
IPP Coordinator  
Marlborough DPW**

Y900

**CITY OF MARLBOROUGH  
ACKNOWLEDGEMENT OF PERMIT LIMITATIONS**

The undersigned acknowledges the receipt of the permit authorizing discharge of wastewater to the Marlborough Sewer System being permit # SIU4817950. The permittee also acknowledges that this permit is issued at its request based upon the application for the permit and the information provided and acknowledges the conditions and limitations set forth in said permit. All information and data contained in this document pursuant to the General Pretreatment Requirements Part 403.14 identifying the nature and frequency of a discharge shall be available to the public without restriction.

City of Marlborough

Rohm and Haas Electronic Materials, LLC

(permitting authority)

(permittee)

By: [Signature]By: [Signature]Date: 4/3/06Date: 11/3/06

## **FACT SHEET**

Rohm and Haas Electronic Materials, LLC located at 455 Forest Street in Marlborough is being issued a Marlborough Industrial Wastewater Discharge Permit, as your industry is considered a Significant Industrial User by the City of Marlborough.

Your discharge will be treated at the Marlborough Westerly Wastewater Treatment Plant on 303 Boundary Street in Marlborough, Massachusetts. The discharge from the Marlborough West Plant enters the Assabet River that then flows to the Sudbury River. The confluence of the Sudbury and Assabet Rivers form the Concord River that flows north to the Merrimac River then out to the Atlantic Ocean.



**EXHIBIT "A"****DEFINITIONS**

1. **BOD**, denotes **BIOCHEMICAL OXYGEN DEMAND**, which means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures in five (5) days at twenty (20) degrees Centigrade expressed in parts per million by weight, as determined by Standard Methods.
2. **CITY** shall mean the City of Marlborough, Mass.
3. **DISCHARGE MEASUREMENT** - The determination of the quantity of wastewater flowing per unit of time in the sewer system at a given point by means of a current meter, rod float, weir, Pitot tube, or other measuring device or method.
4. **FLOW RECORDER** - shall mean a weir, meter, flume or other device, which will measure and record the volume of wastewater discharged.
5. **MGD** - Wastewater flow in million gallons per day.
6. **MAXIMUM DAILY FLOW** - shall mean the highest daily rate of wastewater flow occurring within a single day.
7. **MEASURING DEVICE** - An instrument determining concentration, flow, etc.
8. **METER** - An instrument for measuring the amount and rate of flow of liquids.
9. **MINIMUM DAILY FLOW** - shall mean the smallest rate of wastewater flow of liquids.
10. **MONITORING DEVICE** - shall mean any equipment, which specifically measures, and/or samples wastewater.
11. **PRETREATMENT FACILITIES** - shall mean the structures, equipment, and processes required to collect, treat and transport.
12. **QUANTITY AND QUALITY OF WASTEWATER** in an expression, which determines the amount and composition of the wastewater. Composition, in this case refers to the chemical and physical characteristics of the solid and liquid constituents of the wastewater. These characteristics are usually measured in terms of gallons per day, BOD, and SS.

EFFECTIVE DATE: 2/10/2003  
EXPIRATION DATE: 2/09/2008

PERMIT # NSIU4817950-1

Facility Name: Shipley Company, L.L.C.,  
Advanced Technology Center (Fab 4)  
455 Forest Street  
Marlborough, MA 01752

**COPY**

S8C 5/16/06

**I. DEFINITIONS**

Unless the context clearly indicates otherwise, the meaning of the terms or abbreviations used in this discharge permit shall be defined in exhibit " A ".

**II. GENERAL CONDITIONS**

a. All discharges authorized herein shall be consistent with the terms of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and / or criminal penalties as provided for in Marlborough's Sewer Use Ordinance and / or Public Law 92 - 500. Modifications, additions and / or expansions that increase or decrease the quality and / or quantity of wastewater discharged to the Wastewater Facilities must be reported to the City of Marlborough's Industrial Pretreatment Coordinator, in writing, and this permit may then be modified or reissued to reflect such changes. No change in the permittee's discharge may be made unless reported to, and approved by the City. In no case shall new connections, increased flows, or significant changes in effluent quantity and / or quality be permitted if such will cause violation of the effluent limitation specified herein, unless permitted by the City.

b. After notice and opportunity for a hearing as provided in Section 15 - 9(d) of the Sewer Use Ordinance, this permit may be modified, suspended, or revoked in whole or in part during its term, for causes including the following:

1. Violation of any term or condition of this permit;
2. Obtaining permit by misrepresentation or failure to disclose fully all-relevant facts.
3. A change in conditions or the existence of a condition which requires either a temporary or permanent reduction or elimination of the authorized discharge.
4. Promulgation of a more stringent pretreatment standard by State or Federal agencies having jurisdiction over receiving waters. Permits modified under this section may include implementation schedules, self monitoring requirements, revised effluent limitations, and other provisions necessary to assure compliance.

c. The permittee shall permit the City of Marlborough Department of Public Works and

other duly authorized Industrial Pretreatment personnel upon the presentation of proper credentials:

1. To enter upon permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit during business hours;
2. To have access to and copy any records required to be kept under the terms and conditions of this permit;
3. To inspect any monitoring equipment or monitoring method required in this permit; or
4. To sample at any intake, wastewater facility, or outfall.

d. In the event that the permittee undergoes a major change in ownership of either its corporate voting stock or control of its corporate stock or of the building to which this contract relates, then and in any of said events, the permittee shall notify the City of Marlborough's Pretreatment Coordinator of such change. Failure to so notify the Pretreatment Coordinator within 30 days of such event shall void the permit at the option of the City of Marlborough. In the event of such transfer, the Transferee shall forthwith enter into a new permit with the City, which embodies the terms of this permit.

e. If applicable, all pretreatment facilities shall be operated in a manner consistent with the Sewer Use Ordinance and any Federal, State, or local regulations and guidelines. The Permittee shall at all times maintain in good working order and operate as efficiently as possible any facilities or systems of controls installed or utilized to achieve compliance with the terms and conditions of this permit.

f. The issuance of this permit does not convey any property rights in either its real or personal property, or any exclusive privileges; nor does it authorize or relieve the permittee of any liability for any injury to private property or any invasion of personal rights; nor any infringement of Federal, State, or local laws or regulations; nor does it waive the necessity of obtaining any State or Federal assent required by law for the discharge authorized herein;

g. The provisions of this permit are severable and the invalidity of any condition or subdivision thereof shall not make void any other condition or subdivision thereof.

h. **Non-Compliance:** In the event the permittee is unable to comply with any of the conditions of this permit due to a breakdown of pretreatment facilities, the permittee shall provide the City of Marlborough's Pretreatment Coordinator with the following information, in writing, within five (5) days after commencement of such occurrence;

1. Cause of non-compliance;
2. Anticipated time the condition of non-compliance is expected to continue, or if such conditions have been corrected, the duration of the period of non-compliance;
3. Steps taken by the permittee to reduce and eliminate the non-compliance discharge;

4. Steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

The City reserves all rights and remedies that it has under or by reason of any statutory law, ordinance, or common law to cure any breach of this agreement or to enforce any penalty for the breach thereof.

i. **Emergency Action - Electric Power Failure:** The permittee shall provide an alternative source of power for the operation of its pretreatment facilities or shut down its industrial operation of its pretreatment facilities or shut down its industrial operation during a power failure. The alternative power supply, whether from a generating unit located at the plant site or purchased from an independent source of electricity, must be separate from the existing power source used to operate the pretreatment facilities.

j. **Bypasses, Slug Loads, Spills:** The slug loads, spills or bypass of any discharge from its pretreatment facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except where unavoidable to prevent loss of life. The permittee shall immediately notify the Pretreatment Coordinator, in writing, of each such slug, spill or bypass in accordance with the procedure specified above for reporting non-compliance.

k. **Revisions:** The City of Marlborough reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule or compliance, or other provisions which may be authorized under Federal, State or City acts in order to bring all such discharges into compliance with these acts.

l. **Reapplication:** If the permittee desires to continue to discharge after the expiration of this permit, it shall reapply on the application forms then in use at least sixty (60) days before the Permit expires. Under no circumstances shall the permittee continue to discharge after the expiration of the Permit.

### III. **SPECIAL CONDITIONS**

a. The permittee is required to connect their wastewater facilities to the public sewer in accordance with the provisions of the Sewer Use Ordinance, within ninety (90) days after the date of the official notice to do so, provided that said public sewer is determined to be accessible and available by the Department of Public Works.

b. Upon connection to the City's wastewater facilities, the Permittee is authorized to discharge wastewater whose effluent characteristics shall not exceed the values listed in **Section VII, MONITORING REQUIREMENTS.**

c. **Solids Disposal:** Collected screenings, sludges and other solids removed from liquid wastes shall not be allowed entry into the City's sewer collection system.

### IV. **COSTS AND CHARGES**

a. **Summary of Costs and Charges:** In consideration of the wastewater disposal services provided by the City under the terms of this permit, the permittee shall pay a user charge at established rates.

1. **Connection Costs:** The entire cost of connecting the permittee's wastewater facilities to the City's system shall be paid by the Permittee or otherwise provided for to the satisfaction of the City.
2. **Late Charges:** All billings shall be subject to nine percent per annum late charge if not paid within thirty (30) days of the billing date.
3. **Payments:** All payments shall be made by check drawn payable to the order of the City of Marlborough and mailed to the DPW Municipal Garage, 135 Neil Street, Marlborough, Mass. 01752.

## **V. REPORTING AND MONITORING**

a. At each connection between the permittee's sewer system and the City's collection system the permittee shall install flow meters(s), composite sampler(s), sampling station, or other device(s) that shall measure sample and record the quantity / quality of wastewater flow from the industry. All monitoring devices and sampling stations must be approved by the City of Marlborough. The permittee shall maintain records of all information resulting from any monitoring activities required herein. The permittee shall accept the estimates of quantities of wastewater as established by the Industrial Pretreatment Coordinator during all periods in which the meters fail to measure the wastewater flow correctly.

b. The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements.

c. The Permittee shall provide the above records and shall demonstrate the accuracy of the monitoring devices upon request of the City of Marlborough.

d. The Permittee shall analyze any samples as may be required by the City of Marlborough to ensure effluent quality control.

e. If the Permittee monitors any wastewater parameters more frequently than is required by this permit, the results of such monitoring shall also be made available upon request to the City of Marlborough's IPP coordinator.

f. **Sampling and Analysis:** The sampling, preservation, handling, and analytical methods used must conform to the Approved Methods in **40 CFR 136**.

g. All limitations as given in this permit are conditional, and may be revised, should the concentrations prove detrimental to the proper operation and maintenance of the Treatment Facilities. Upon notification to reduce the specified concentrations, the Permittee shall be responsible for all costs incurred at the Treatment Facilities, which resulted because of excessive concentrations.

**h. All industries are required to resample and analyze for any parameter that is in violation of their permit within 30 (thirty) days, and submit them to the IPP coordinator.**

## VI IMPLEMENTATION SCHEDULE

No later than fourteen (14) calendar days following the date identified in the following schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or non-compliance. In the latter case, the notice shall include the cause of non-compliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

1. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
2. A pH meter with a continuous chart recorder shall be installed for monitoring regulated wastewater within thirty (30) days of the effective date of this permit and calibrated at least weekly.
3. Install a flow meter for continuous measurement of discharge volume within thirty (30) days of the effective date of this permit. This meter shall be calibrated at least annually.

### b. Pretreatment

The permittee shall achieve compliance with the final effluent limitations as delineated below.

**1. This facility is subject to the terms and conditions set forth in the City of Marlborough Sewer Use Ordinance and this permit.**

## VII. MONITORING REQUIREMENTS

Monitoring Facilities – Advanced Technology Center (Fab 4) building. Monitoring samples are to be taken after all industrial processes and pretreatment. Monitoring location shall be identified as NS02.

The Permittee shall collect and analyze representative samples for listed parameters not less frequently than the following schedule:

<u>Parameter</u>	<u>Units</u>	<u>Daily Maximum Limit</u>	<u>Sample Type</u>	<u>Sample Freq</u>
Ammonia, nitrogen	mg/l	NLS	C	S
Antimony	mg/l	NLS	C	S
Arsenic	mg/l	0.42	C	S
BOD <sub>5</sub>	mg/l	NLS	C	S
Beryllium	mg/l	0.12	C	S
COD	mg/l	NLS	C	S
Cadmium	mg/l	0.02	C	S
Chromium	mg/l	0.77	C	S
Copper	mg/l	0.30	C	S
Cyanide	mg/l	0.23	G	S
Flow, Process	gpd	3,000	CONTINUOUS	CONTINUOUS

Lead	mg/l	0.08	C	S
Mercury	mg/l	0.0007	C	S
Nickel	mg/l	0.37	C	S
Oil and grease	mg/l	100	G	S
Phenol	mg/l	NLS	G	S
Selenium	mg/l	0.81	C	S
Silver	mg/l	0.01	C	S
EPA 624, 625*	mg/l	2.13	G/C	S
Thallium	mg/l	0.93	C	S
Total Phosphorus	mg/l	NLS	C	S
TSS	mg/l	NLS	C	S
Zinc	mg/l	0.50	C	S
PH	SU	6.0 - 9.0	CONTINUOUS	CONTINUOUS

\* EPA 624 is to be done on a grab sample; EPA 625 is done on a composite sample.

**Abbreviations:** C = Composite, G = Grab, D = Daily, NLS = No Limit Set,  
Q = Quarterly, S = Semi Annual, Y = Yearly (Annually)

- A. All Weekly reports are due no later than three (3) weeks from the sampling date.
- B. All Monthly reports are due by the 15<sup>th</sup> day of the following month.
- C. All Quarterly reports are due no later than the 15<sup>th</sup> day of April, July, October and January.\*
- D. All Semi-annual reports are due in June and December.
- E. All Annual reports are to be received no later than December 31st.

**\*Example:** If there is a requirement for quarterly phosphorus sampling, a sample has to be taken in January, February or March and the results are to be received by the IPP coordinator by April 15<sup>th</sup>. This scenario is the same for all calendar quarters.

#### Municipal Limitations / Conditions / General comments

1. Adhere to the City of Marlborough's Sewer Use Ordinance.
2. Ensure that a functional composite sampler is available for the collection of a representative effluent sample.
3. Ensure that the pH meter with a continuous chart recorder is calibrated at least biweekly.
4. Ensure that the flow meter for continuous measurement of discharge volume is calibrated at least annually.
5. The wastewater discharge shall not contain a visible oil sheen or foam at any time.
6. The discharge shall not contain objectionable discoloration.

Permit #: NSIU4817950-1

Effective date: 2/10/2003  
Expiration date: 2/09/2008

**This page is considered part of the discharge permit.**

**CITY OF MARLBOROUGH  
AUTHORIZATION TO DISCHARGE TO THE EASTERLY / WESTERLY  
WASTEWATER TREATMENT FACILITY**

Company Name: Shipley Company, L.L.C.

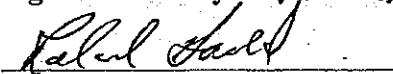
Address: 455 Forest Street  
Marlborough, MA 01752

Telephone Number: 508-481-7950

The Shipley Company is authorized by the Department of Public Works to discharge wastewater from the Advanced Technology Center (Fab 4) located at 455 Forest Street, Marlborough, Massachusetts to the Marlborough Westerly WWTP in accordance with the following conditions.

**Adhere to all of the conditions in your Industrial Wastewater Discharge  
Permit # NSIU4817950-1**

**This permit consists of 12 pages including effluent limitations, monitoring requirements and general conditions etc.**

Signed this 5 day of February, 2003  


Roland Gould  
IPP Coordinator  
Marlborough DPW



**CITY OF MARLBOROUGH  
ACKNOWLEDGEMENT OF PERMIT LIMITATIONS**

The undersigned acknowledges the receipt of the permit authorizing discharge of wastewater to the Marlborough Sewer System being permit # NSIU4817950-1. The permittee also acknowledges that this permit is issued at its request based upon the application for the permit and the information provided and acknowledges the conditions and limitations set forth in said permit. All information and data contained in this document pursuant to the General Pretreatment Requirements Part 403.14 identifying the nature and frequency of a discharge shall be available to the public without restriction.

City of Marlborough

Shipley Company, L.L.C.

(permitting authority)

(permittee)

By: 

By: 

Date: 2/5/03

Date: 5<sup>th</sup> Feb 03

## **FACT SHEET**

Shipley Company L.L.C. located at 455 Forest Street in Marlborough is being issued this Marlborough Industrial Wastewater Discharge Permit for the Advanced Technology Center, designated as "Fab 4".

Your discharge will be treated at the Marlborough Westerly Wastewater Treatment Plant on 303 Boundary Street in Marlborough, Massachusetts. The discharge from the Marlborough West Plant enters the Assabet River that then flows to the Sudbury River. The confluence of the Sudbury and Assabet Rivers form the Concord River that flows north to the Merrimac River then out to the Atlantic Ocean.

EXHIBIT "A"

DEFINITIONS

1. BOD, denotes BIOCHEMICAL OXYGEN DEMAND, which means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures in five (5) days at twenty (20) degrees Centigrade expressed in parts per million by weight, as determined by Standard Methods.

2. CITY shall mean the City of MARLBOROUGH, MASS.

3. DISCHARGE MEASUREMENT - The determination of the quantity of wastewater flowing per unit of time in the sewer system at a given point by means of a current meter, rod float, weir, Pitot tube, or other measuring device or method.

4. FLOW RECORDER shall mean a weir, meter or flume or other device, which will measure and record the volume of wastewater discharged.

5. MGD - Wastewater flow in million gallons per day.

6. MAXIMUM DAILY FLOW shall mean the highest daily rate of wastewater flow occurring within a single day.

7. MEASURING DEVICE - Instrument determining concentration, flow, etc.

8. METER - An instrument for measuring the amount and rate of flow of liquids.

9. MINIMUM DAILY FLOW shall mean the smallest rate of wastewater flow of liquids.

10. **MONITORING DEVICE** shall mean any equipment which specifically measures and/or samples wastewater.

11. **PRETREATMENT FACILITIES** shall mean the structures, equipment, and processes required to collect, treat, and transport.

12. **QUANTITY AND QUALITY OF WASTEWATER** is an expression which determines the amount and composition of the wastewater. Composition, in this case, refers to the chemical and physical characteristics of the solid and liquid constituents of the wastewater. These characteristics are usually measured in terms of gallons per day, BOD and SS.

13. **SAMPLE** shall mean a portion of the wastewater obtained for analytical purposes. This portion may be a single sample (grab), composite sample, continuous sample or periodic sample.

a. **SAMPLER** - A device used with or without flow measurement to obtain an aliquot portion of water or wastewater for analytical purposes. May be designed for taking single sample (grab), composite sample, continuous sample, periodic sample.

b. **COMPOSITE WASTEWATER SAMPLE** - A combination of individual samples of water or wastewater taken at selected intervals, generally hourly for some specified period, to minimize the effect of the variability of the individual sample. Individual

samples shall be proportioned to the flow at time of sampling.

c. **SAMPLING STATION** - A specified site where monitoring takes place on a regular basis.

14. **SHALL** is mandatory; **MAY** is permissive.

15. **SUSPENDED SOLIDS** shall mean the solids that either float on the surface of, or are in suspension in wastewater and which are largely removable by laboratory filtering, and wastewater treatment plant.

16. **WASTEWATER TREATMENT FACILITIES** - The structures, equipment, and processes required to collect, transport, treat and dispose of wastewater and dispose of the effluent including but not limited to collection system, interceptors, and wastewater treatment plant.

17. **TREATMENT (TREAT)** shall mean a process to which wastewater is subjected in order to remove or alter its objectional constituents and thus render it less offensive or dangerous.

18. **WASTEWATER** - The spent water of an industry. Spent water may be a combination of the liquid wastes from industrial establishments, together with any groundwater, surfacewater and storm water that may be present.

19. **WASTEWATER DISPOSAL** - The act of disposing of wastewater by discharging to the City's Wastewater Treatment Facilities.



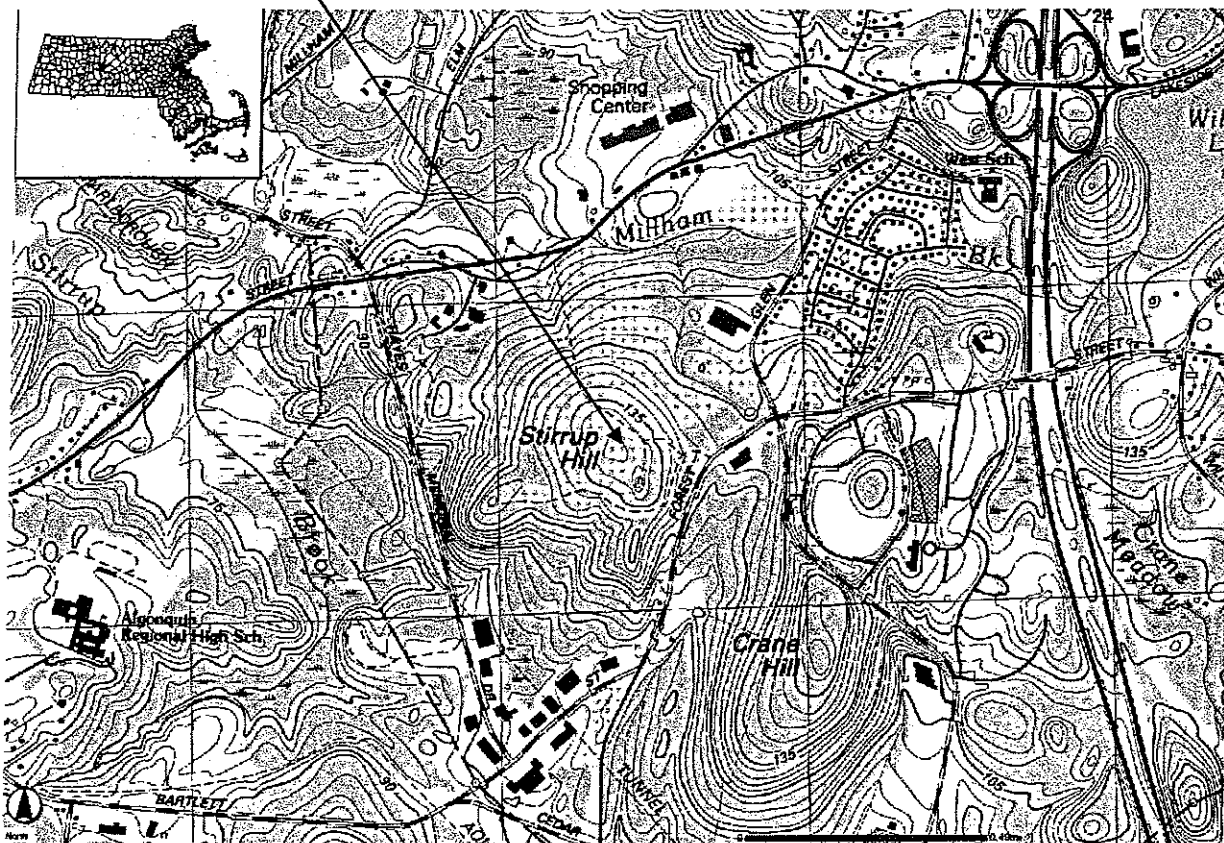
## Attachment C

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### Site Map and DEP Priority Resource Map

- Main Pretreatment Facility
- ATC Pretreatment System

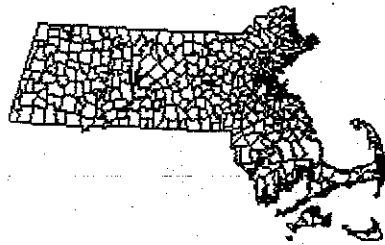
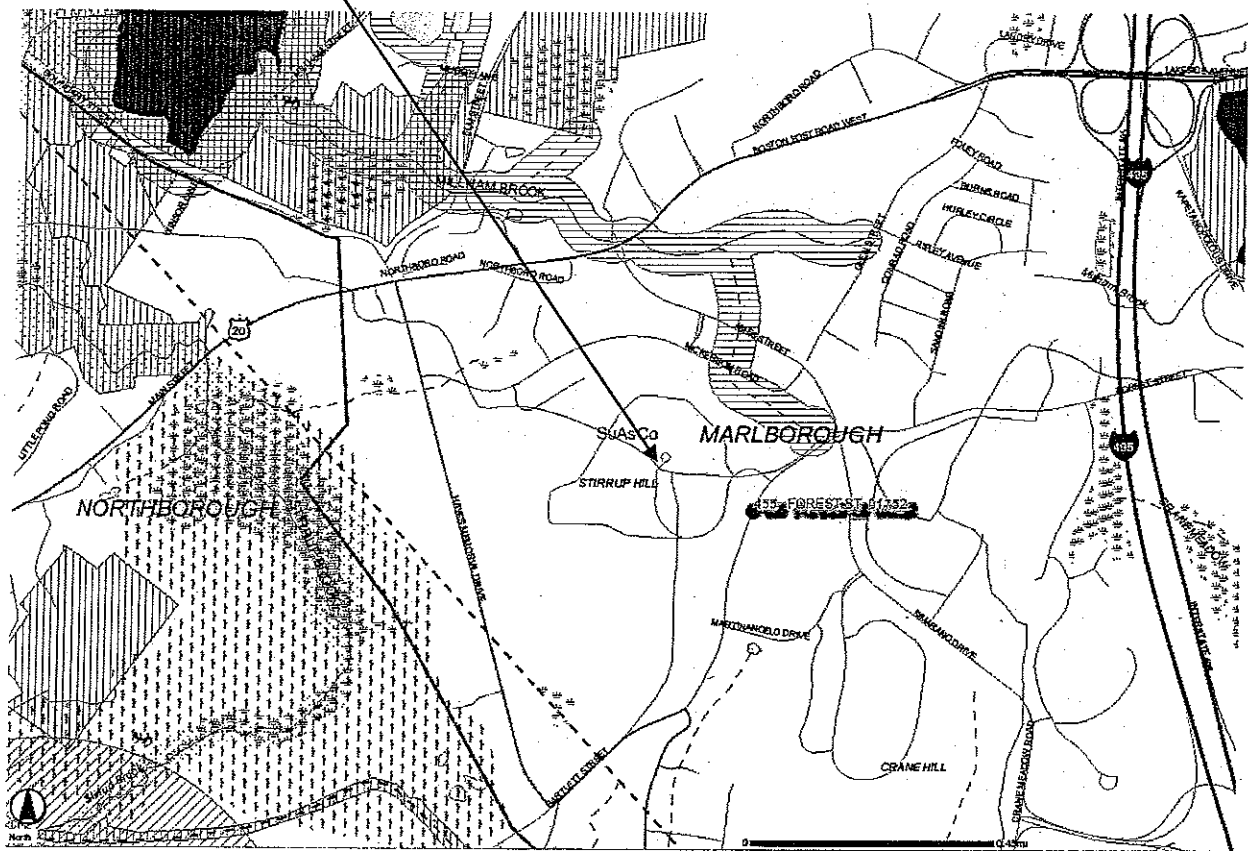
## Rohm and Haas



**USGS 25k Topographic Maps**



# Rohm and Haas



## DEP MCP 21e Map Legend

- Zone IIs
- IWPAs
- Zone A
- Sole Source Aquifers
- Solid Waste Sites
- Protected Openspace
- ACECs
- NHESP Estimated Habitat of Rare Wildlife in Wetland Areas
- Certified Vernal Pools 2003 NHESP
- Subbasins
- Mass Major Basins
- DEP Region
- Town Arcs
- County Boundaries

- Aquifers, By Yield**
  - HIGH YIELD
  - MEDIUM YIELD
- Non Potential Drinking Water Source Area**
  - HIGH YIELD
  - MEDIUM YIELD
- FEMA Floodplains**
  - 100 YEAR FLOODPLAIN

- Hydrography**
  - WATER
  - RESERVOIR
  - WETLANDS
  - SALTWATER WETLANDS
  - FLATS/SHOALS
- Rivers and Streams**
  - PERENNIAL
  - INTERMITTENT
  - SHORELINE
  - MAN MADE SHORE
  - DAM
  - AQUEDUCT

- EOT-OTF Roads**
  - LIMITED ACCESS HIGHWAY
  - MULTILANE HWY. NOT LIMITED ACCESS
  - OTHER NUMBERED HWY
  - MAJOR ROAD - COLLECTOR
  - MINOR STREET OR ROAD
- Tracks and Trails MHO**
  - TRACK
  - TRAIL
- Transmission Lines**
  - PIPELINE
  - POWERLINE
  - TRAIN



## Flood Insights test results for :

Latitude: 42.325192 Longitude: -71.597773

Geocoding Accuracy: Not Available

## Flood Zone Determinations

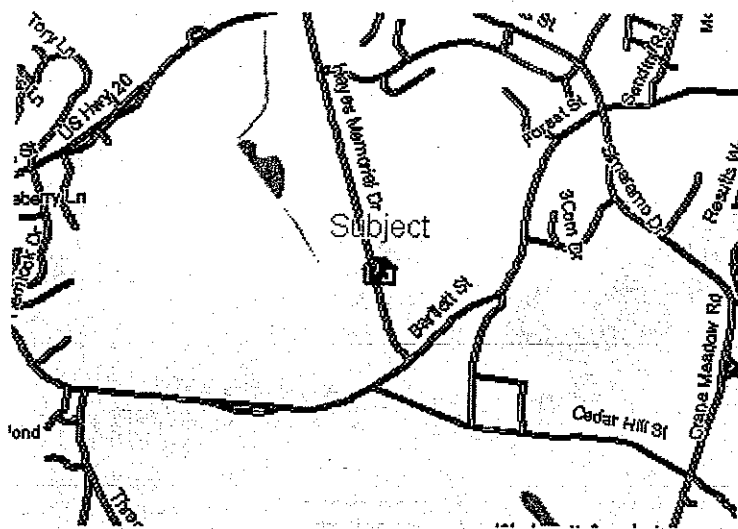
Test Description

SFHA (Flood Zone) Within 250 feet of multiple flood zones?

Out No

Community	Community Name	Zone Panel	Panel Date
250203	MARLBOROUGH, CITY OF	C	0025B January 06, 1982
FIPS Code	Census Tract		
25017	3214.00		

Copyright 2000, First American Flood Data Services. All rights reserved.



## FloodMap Legend

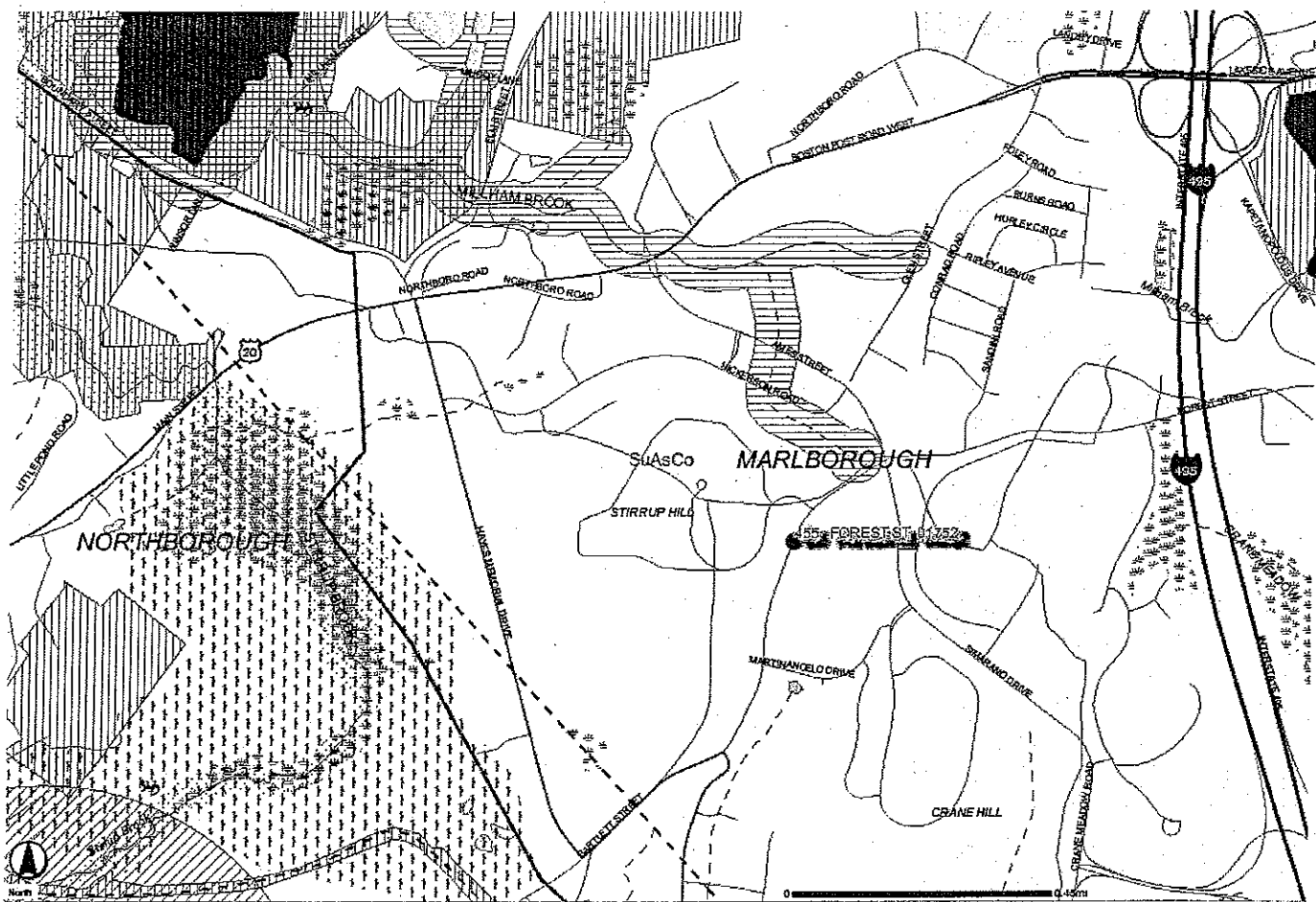
## Flood Zones

- Areas inundated by 500-year flooding
- Areas outside of the 100- and 500-year floodplains
- Areas inundated by 100-year flooding
- Areas inundated by 100-year flooding with velocity hazard
- Floodway areas
- Floodway areas with velocity hazard
- Areas of undetermined but possible flood hazards
- Areas not mapped on any published FIRMI

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[www.cdys.com](http://www.cdys.com)

This report was generated by: ebi on 08-03-2004

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## **Attachment D**

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### **Engineering Plans**

- **Main Pretreatment Facility**
- **ATC Pretreatment System**

January 4, 2008

Sarita Croce  
Environmental Engineering Manager  
Rohm and Haas Electronic Materials  
455 Forest Street  
Marlborough, MA 01742

**Subject: Review and Certification of IWPS Drawings by MA-Licensed PE**

Dear Sarita:

In response to your request to do so, Envirobusiness, Inc. (EBI) has completed a review of the two (2) industrial wastewater pretreatment systems (IWPS) currently operating at the Rohm and Haas Electronic Materials (RHEM) manufacturing and research campus located at 455 Forest Street in Marlborough, MA. This review was completed as part of RHEM's submittal to MA Department of Environmental Protection (MA DEP) under permit category BWP IW 38, in accordance with 314 CMR 7.00. Enclosed, please find a written Certification Statement, signed and sealed by a Professional Engineer licensed to practice in Massachusetts. In addition, four sets of PE-sealed drawings entitled "Industrial Wastewater Pretreatment Systems", dated 1-04-08, are enclosed.

The engineering review was completed by Mr. Christopher A. Walton, PE (MA license #39510). Mr. Walton is a Senior Engineer at EBI, with more than 17 years of experience with industrial wastewater pretreatment system design, permitting, construction, and operation. He is also a Grade 6C licensed wastewater treatment plant operator (MA license #8089).

**Scope of Review**

This engineering review is limited to the piping, equipment, and controls that comprise the facility's special waste collection and treatment systems (a.k.a Industrial Wastewater Pretreatment System, or IWPS), up to and including the facility's sewer connection in Forest Street. The scope of the review extends only to the piping and equipment as shown on the attached engineering drawings, dated 1-04-08. Process piping and operations "upstream" of the waste transfer stations in the Main Building are not included in this review. This review is also limited to an analysis of the facility's compliance with the design and construction standards set forth in 314 CMR 7.05(2)(g)3. Any certification made herein does not imply compliance with any other regulation or statute, nor does it relieve Rohm and Haas of its obligation to comply with applicable regulations.

Please feel free to contact me at any time regarding this certification and/or the attached drawings.

Very truly yours,  
EBI Consulting, by:



Christopher A. Walton, PE  
Senior Engineer

Cc: Paul Richard, EBI

Enc

## **P.E. Certification**

Rohm and Haas Electronic Materials  
455 Forest Street  
Marlborough, MA 01742

### **Industrial Wastewater Pretreatment Systems – As-Built Process Flow Diagram and Layout**

I, being familiar with the provisions of 314 CMR 7.00 (MA DEP Sewer System Extension and Connection Permit Program), regarding engineering design and construction standards for sewer connections and industrial wastewater pretreatment systems, have reviewed the industrial wastewater pretreatment systems in operation at Rohm and Haas Electronic Materials, located at 455 Forest Street in Marlborough, MA and believe that they have been designed and built in accordance with 314 CMR 7.05(2)(g)3.

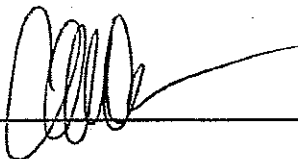
This certification is valid for two (2) industrial wastewater pretreatment systems (Main Building and Advanced Technology Center (ATC) Building) as depicted in the as-built drawing set dated January 4, 2008, titled "Industrial Wastewater Pretreatment Systems", and inclusive of process flow diagrams and layouts for both industrial wastewater pretreatment systems in place at Rohm and Haas.

This certification is no longer valid when any planned or unplanned modification takes place that can change the quantity or quality of wastewater discharges from the facility. It is understood that Rohm and Haas Electronic Materials also certifies that the information provided is true and accurate.

This certification does not relieve Rohm and Haas Electronic Materials of its duty to operate its industrial wastewater pretreatment systems and sewer connections in accordance with 314 CMR 7.00.

Name:

Christopher A. Walton



Date:

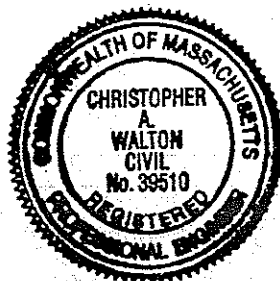
1-04-08

License Number:

39510

State Issuing License:

MA







## **Attachment E**

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### **Description of Industrial Wastewater Pretreatment Systems**

- **Main Pretreatment Facility**
- **ATC Pretreatment System**

## PROCESS DESCRIPTION

### *Main Pretreatment Facility Process Description*

The industrial wastewater treated in the Main Pretreatment Facility consists of several individual waste streams that receive segregated pretreatment, which is generally followed by flow equalization and dual stage pH neutralization. RHEM waste streams are segregated and collected in line storage tanks prior to treatment.

- *Dilute Process Rinse Waters (2nd Metal Bearing Rinses and Equipment Wash Down)*

Process second rinse water is collected in the 8,000 gallon main process tank. The effluent is pumped to one of three batch treatment tanks for metals removal.

The pH of the rinse water is raised to the appropriate pH for optimal removal efficiency with the addition of lime. A Barclay polymer-based flocculant is then added and mixed for a minimum of 15 minutes. In addition, polymer and coagulants are added as needed to enhance solids separation. When mixing is complete, the treated wastewater is allowed to settle for 1-4 hours. The supernatant is usually decanted to Neutralization Tank # 1; however the Post Tank may also be used for flow equalization and pH adjustment prior to discharge. Settled solids are pumped to the sludge thickening tank for further settling. The supernatant from the sludge thickening tank is eventually returned to the batch treatment tank process. Normally, the supernatant is pumped to the Post Tank, and sometimes to Neutralization Tank #1. The sludge is pumped to a dedicated filter press for solids dewatering. The dewatered sludge filter cake is shipped off-site for proper disposal as a non-regulated waste.

- *Metal Concentrates (Copper and Nickel 1st Rinses)*

Metal concentrates are segregated into separate holding tanks. The copper and nickel rinses are pumped to a holding tank prior to processing in the Calfran cold evaporation unit. The residual concentrate is collected and shipped off-site for disposal as hazardous waste. Effluent from the evaporation unit is directed to RHEM's main process tank for further treatment. The final step is flow equalization and pH adjustment prior to discharge.

- *Cyanide (1st Rinses)*

*Cyanide rinses are collected in 55 gallon drums and shipped off-site for disposal.*

NOTE: production of cyanide bearing chemicals has decreased significantly in recent years, and accompanying rinse wastes have been reduced to almost zero.

- *Acid, Alkaline, Ammonia and Hypophosphate Rinses (non-metal bearing waste streams)*

Confirmation metals testing are performed prior to discharging these rinses. These rinses are pumped to the post treatment tank for pH adjustment prior to discharge.

- *Tin (1st Rinses)*

Tin rinses are collected in a 500 gallon storage tank. The contents are treated for metals removal (see *Process Rinse Waters* above), and are then directed to the post treatment tank for flow equalization and pH adjustment prior to discharge.

- *Catalyst Reclaim (Palladium Rinse)*

Palladium is collected in drums and then pumped into a 200 gallon treatment tank, where the pH is then adjusted to 11 with the addition of sodium hydroxide. After settling for 4 hours, the decant is pumped to the main process tank for additional metals removal (see *Process Rinse Waters* above), and are then directed to the post treatment for flow equalization and pH adjustment prior to discharge. The settled palladium sludge is shipped off-site for reclaim.

- *Scrubber Wastewater*

The effluent from the R&D ion exchange system (see below) provides feed water to the scrubber system, which consists of three wet air scrubbers that treat fumes from various locations throughout the RHEM plant. City water is added to the scrubber system feed tank automatically when the volume of R&D system effluent is not sufficient for system operation. Scrubber system wastewater is discharged to the First Stage Neutralization Tank where wastewater is automatically neutralized by the addition of sodium hydroxide or hydrochloric acid, as needed.

#### ***R&D Ion Exchange System***

Wastewater from various laboratory operations is pumped to a primary tank for pH adjustment, from which it overflows to a secondary tank for further pH adjustment. The wastewater is then pumped through dual cartridge filters before being pumped through one of two ion exchange units. The ion exchange effluent is pumped into a holding tank for final pH adjustment prior to discharge to the scrubber feed tank (see *Scrubber Wastewater* above).

### ***ATC Pretreatment System Process Description***

Rohm and Haas Electronic Materials, LLC (RHEM) Advanced Technology Center (ATC), also known as Fab 4, is located at 455 Forest Street in Marlborough, Massachusetts, a part of the larger RHEM complex. Operations at this facility are described by SIC Code 2899 (Chemicals and Chemical Preparations, Not Elsewhere Classified). The ATC facility is a state of the art photolithography processing facility, capable of housing and operating the most sensitive lithography tools available. The facility operates pilot size clean rooms to process semiconductor wafers and plating lines to process printed wire boards as well as a number of quality control and analytical laboratories. The process consists of photoresist developing in which an alkaline developer solution (~2% TMAH in de-ionized water) is applied to UV-exposed, resist-coated semiconductor wafers, followed by a de-ionized water rinse. Although the facility utilizes production scale tools, its main activities include research and development (R&D) and the quality control of RHEM's products. Hence, there are no products produced and no production at the site. Additionally, the chemical and semiconductor wafer throughput, along with other material usage, will be very low in comparison to a standard manufacturing facility.

Rinsewater from the developer process is piped to a 200-gallon storage tank. Once the volume in the tank reaches approximately 20% of its total capacity, the pH of the rinsewater is manually adjusted (usually lowered) to pH 7. The rinsewater is then transferred via a sump pump to a carbon filter and then two ion exchange cartridges connected in series. After ion exchange treatment, the wastewater is transferred to a pH adjustment tank for active neutralization with sodium hydroxide and sulfuric acid. The reverse osmosis (RO) reject water is transferred directly to the neutralization tank. The treated wastewater from the neutralization tank flows into a final equalization tank where the effluent pH and flow is recorded, before it is continuously discharged to the Marlborough Westerly Waste Treatment Works (MWWTW).

In April of 2008, RHEM will add an additional process to the existing ATC facility to be known as "Fab 5". Fab 5 operations are very similar to all the existing ATC operations. The addition of Fab 5 will increase the capacity of this facility. Wastewater from this building will be treated by the same industrial wastewater pretreatment system as the ATC building. Currently, there are no plans to add new chemicals for the processes in Fab 5. RHEM estimates that the total process flow discharged, including the new Fab 5, through this system will average approximately 2,500 gallons per day with a maximum of 3,000 gallons per day.